

TEAC

SERVICE MANUAL

CTM596SR CTM686ST CTM686STR 59cm/68cmCTV

Effective: August, 1997

CTM596SR/CTM686ST/CTM686STRSERV

| |
|--|
| MODEL: CT-M596SR |
| PROBLEM: Flagwaving with Macrovision tapes. |

This problem occurs when playing video cassette movies encoded with Macrovision Copy Guard

Instructions:

Check resistors on the Teletext pcb and change if necessary.

R820 – 270 ohm

R821 - 1k ohm

R854 – 390 ohm

Add a 470pF capacitor (ceramic) across C137

Check and adjust Horizontal Freq., Horizontal Position and AGC if necessary.

Regards,

Fabian Lubanovic
TEAC Australia Pty Ltd.

SERVICE MANUAL

25" / 28" / 29"
SOLID STATE
Color Television
Receiver

ART-TECH. TV.

(PAL - SECAM VERSION)
PHILIPS IC

This manual is the latest at the time of printing, and does not include the modification which may be made after the printing, by the constant improvement of product.

Document : SM - 14PM

Date : 15 JUL 1991

Approved by: [Signature]
(Sunny Cheung)

Checked by: [Signature]
(Choi Ping Kuen)

SPECIFICATION

SUPPLY VOLTAGE : AC220V 50Hz $\geq +10\%$ / -20%

| SYSTEM : | PAL - I / I | PAL - BG | PAL - I (UK) | PAL - SECAM - BG / DK | PAL - SECAM - BG / DK (HYPER) | PAL - BG (HYPER) | PAL - BG (CATV) | SECAM - L | L' | |
|---|---------------------|----------------------------|-----------------|----------------------------|-------------------------------------|-----------------------------------|----------------------------------|------------------|---------|----------------|
| CHANNEL L - VHF : H - VHF : UHF : | 4 - 13 21 - 69 | 2 - 4 5 - 12 21 - 69 | 21 - 69 | 1 - 5 6 - 12 21 - 69 | 1 - 5 6 - 12 21 - 69 | E2 - S10 E5 - S41 E21 - E69 | E2 - S2 E5 - S20 E21 - E69 | 1 - Q 21 - 69 | FB - FC | CH CH CH |
| VIF FREQUENCY : | 38.9 | 38.9 | 39.5 | 38.0 | 38.9 | 38.9 | 38.9 | 38.9 | 32.7 | MHz |
| SIF FREQUENCY : | 32.9 | 33.4 | 33.5 | 31.5 32.5 | 32.4 33.4 | 33.4 | 33.4 | 32.4 | 39.2 | MHz |
| CHROMA IF FREQUENCY : | 34.47 | 34.47 | 35.07 | 33.57 33.57 | 34.47 34.47 | 34.47 | 34.47 | 34.47 | | MHz |
| INTER-CARRIER FREQUENCY : | 6.0 | 5.5 | 6 | 6.5 5.5 | 6.5 5.5 | 5.5 | 5.5 | 6.5 | 6.5 | MHz |
| SCANNING HORIZONTAL : VERTICAL : | 15625 LINE 50 Hz | | | | | | | | | |
| ANTENNA INPUT IMPEDANCE : | 75 OHM | | | | | | | | | |
| CRT : | 25" - 29" | | | | | | | | | |

| ITEMS OF MEASUREMENT | STANDARD | UNIT |
|---|----------------|-------------------|
| VIDEO SENS. AT S/N 30db | | |
| L - VHF | ≤ 57 | dbuv |
| H - VHF | ≤ 57 | dbuv |
| UHF | ≤ 60 | dbuv |
| SOUND SENS. AT S/N 30db | | |
| L - VHF | ≤ 42 | dbuv |
| H - VHF | ≤ 42 | dbuv |
| UHF | ≤ 48 | dbuv |
| AGC CHARACTER | ≥ 60 | db |
| SELECTIVITY -1.5 MHz | ≥ 35 | db |
| + 8 MHz | ≥ 40 | db |
| COLOR SENS. | ≤ 45 | dbuv |
| COLOR LOCK - IN RANGE | $\geq \pm 300$ | Hz |
| VERTICAL LOCK - IN RANGE | ≥ 6 | Hz |
| HORIZONTAL LOCK - IN RANGE | ≥ 400 | Hz |
| MAX BRIGHTNESS | ≥ 100 | cd/m ² |
| MAX OUTPUT POWER | ≥ 4.5 | W |
| OUTPUT POWER AT 10% THD | ≥ 3.5 | W |
| BUZZ | ≤ -40 | db |
| AFC RANGE | $\geq +1$ | MHz |
| | ≥ -0.5 | MHz |
| MIN. VOL HUM | ≤ 20 | mV |
| RESOLUTION HORIZONTAL | ≥ 300 | LINES |
| VERTICAL | ≥ 400 | LINES |
| LINEARITY DISTORTION VERTICAL | ≤ 10 | % |
| HORIZONTAL | ≤ 10 | % |
| RASTER DISTORTION | ≤ 5 | % |
| REMOTE CONTROL DISTANCE | ≥ 5 | METER |
| ANGLE | $\geq \pm 15$ | DEGREE |
| POWER CONSUMPTION (AT NORMAL CONDITION) | ≤ 120 | WATTS |
| W / WOOFER POWER CONSUMPTION | ≤ 150 | WATTS |
| (AT NORMAL CONDITION) | | |
| CONVERGENCE DISLOCATION AT AREA "A" | ≤ 0.4 | % |
| AREA "B" | ≤ 0.8 | % |
| (see fig.1) | | |

VIDEO INPUT LEVEL : 1.0V p-p ± 3 dB
VIDEO OUTPUT LEVEL : 1.0V p-p ± 3 dB

L / R AUDIO INPUT LEVEL : 0.5V Rms ± 3 dB
L / R AUDIO OUTPUT LEVEL : 0.5V Rms ± 3 dB

WOOFER AUDIO INPUT LEVEL : 125mV Rms ± 25 mV
WOOFER AUDIO FREQUENCY : 100Hz ± 3 Hz
WOOFER SUPPLY VOLTAGE DC : 18V ± 1 V
WOOFER MAX OUTPUT POWER : ≥ 7.5 WATTS

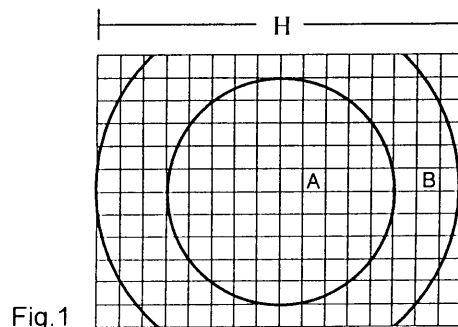


Fig.1

ALIGNMENT INSTRUCTION

PLEASE READ BEFORE ATTEMPTING SERVICE

1. Never disconnect any leads while receiver is in operation.
2. Disconnect all power before attempting any repairs.
3. Do not short any portion of the circuit while power is on.
4. For safety reasons, all parts replaced should be identical, (for parts and part numbers see parts list).
5. Before alignment the set must be pre-heated for 30 minutes or more and erase magnetism thoroughly from CRT front chassis frame by erase coil.
6. An isolation transformer should be used during any dynamic service to avoid possible shock hazard.

TEST EQUIPMENT

- | | |
|---|---|
| 1. VIF Sweep Generator | 7. Volt Ohmmeter |
| 2. SIF Sweep Generator | 8. High Voltage Meter |
| 3. Colour Bar Dot Cross Hatch Generator | 9. Ampere Meter (0.5 Class, DC 3mA Max) |
| 4. DC Power Supply | 10. Demagnetizing Coil |
| 5. Oscilloscope | 11. Philips Pattern Generator |
| 6. Vacuum Tube Voltmeter | 12. High Pot Tester |

CONVERGENCE ADJUSTMENT (SEE FIG.2)

1. Receive a dotted pattern input signal $70\text{dB} \pm 10\text{dB}$.
2. Unfix the convergence magnet clamber and align red with blue dots at the center of the screen by rotating (R,B) static convergence magnets.
3. Align Red / Blue with green dots at the center of the screen by rotating (RB-G) static convergence magnet.
4. Fix the convergence magnets by turning the clamber.
5. Remove the DY wedges and slightly tilt the deflection yoke horizontally and vertically to obtain the good overall convergence.
6. Fix the deflection yoke by wedges.
7. If purity error is found, follow "PURITY ADJUSTMENT" INSTRUCTIONS.

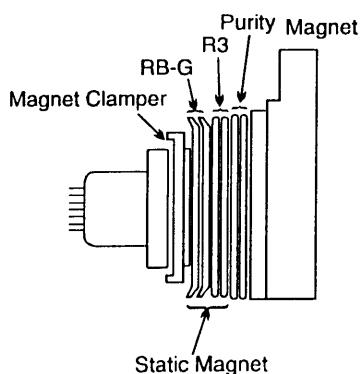


Fig. 2

AFC ALIGNMENT

1. Connect Philips Pattern Generator to tuner IF out and Ground (Frequency is as FROM 1 colour bar input signal level is $80\text{dB} \pm 3\text{dB}$).
2. Connect VOLT Ohmmeter to PIN18 and Ground to IC102.
3. Adjust T101 to obtain a DC $7\text{V} \pm 0\text{V}$.

SOUND TANK COIL ALIGNMENT

1. Connect Philips Pattern Generator to tuner IF point and Ground. (see fig.3)
(Frequency selection is subjected to require system as Form.1)
2. Connect Volt Ohmmeter to PIN12 and Ground at IC101.
3. Adjust T103 to obtain a DC2.8V \pm 0.1V.

* VIF signal is 80dB +3dB

| SYSTEM | VIF | UNIT |
|--------------------------|-------|------|
| PAL BG, BG / DK, I / I | 38.9M | Hz |
| PAL I | 39.5M | Hz |
| PAL DK / I (W / NICAM) | 38.9M | Hz |

FORM.1

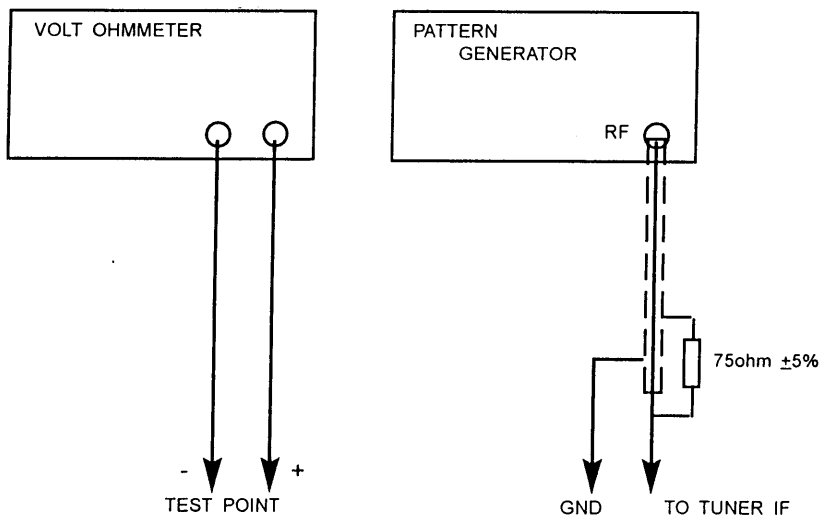


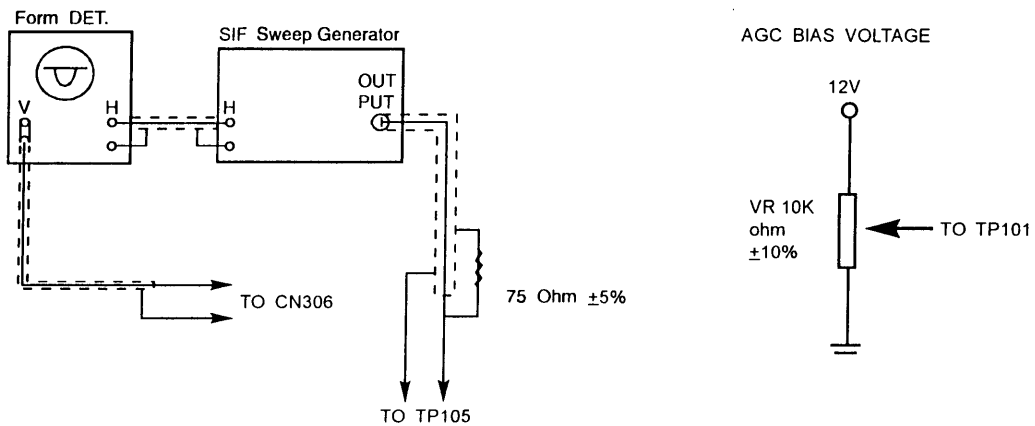
Fig.3

Remark: All frequency of marker point can have \pm 0.2% tolerance.

SOUND DEMODULATION ALIGNMENT

1. Connect 14V \pm 1V B+ bias voltage to D404 (-) and Ground.
2. Connect 14V \pm 1V B+ bias voltage to C923 (+) and Ground.
3. Connect the sweep generator to TP105. (frequency refer to SIF form)
4. Connect waveform detect to PIN1 and PIN3 (for german stereo system) at CN306.
5. Connect AGC Bias voltage to TP101.
6. The output of sweep generator should be -30dB \pm 5dB.

Remark: All frequency of marker point can have +0.2% tolerance.



7. Adjust T104 to obtain the waveform as Fig.4

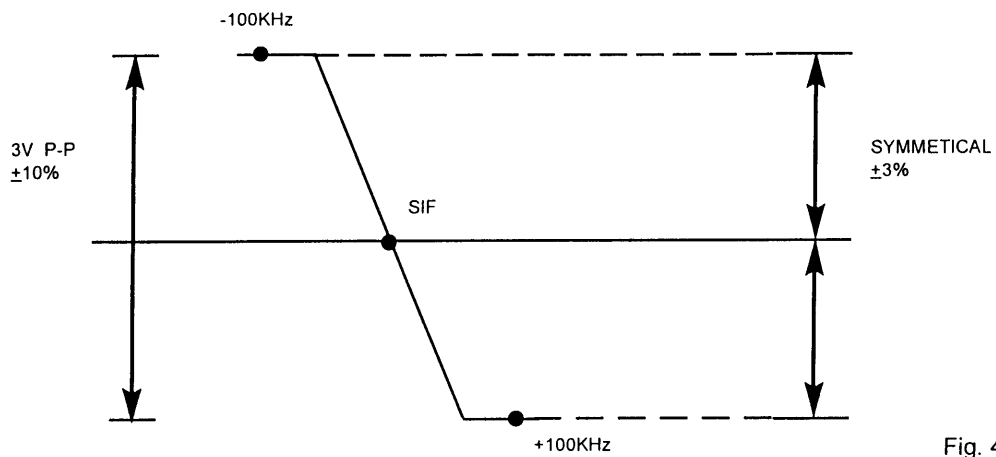


Fig. 4

| ADJUSTMENT | T104 |
|----------------------------|--------|
| SYSTEM SIF | |
| PAL BG | 5.5MHz |
| PAL BG / DK, DK / I, I / I | 6.0MHz |

FORM. 2

GERMAN STEREO SIF ADJUSTMENT

Adjust T102 to obtain the waveform as FIG. 5

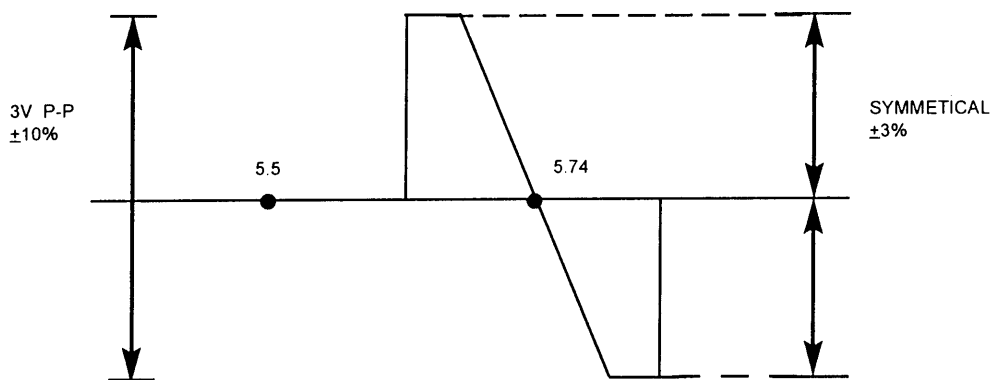


Fig. 5

STEREO AND DUAL SOUND ALIGNMENT

1. Receive colour bar pattern (with stereo and Dual Sound).
2. Connect oscilloscope to TP001, adjust VR001 with stereo signal to get a max waveform as Fig.6.
3. Connect oscilloscope to TP002, adjust VR003 with dual signal to get a max waveform as Fig.7.
4. Adjust T001 to get a max amplitude on both dual and stereo.

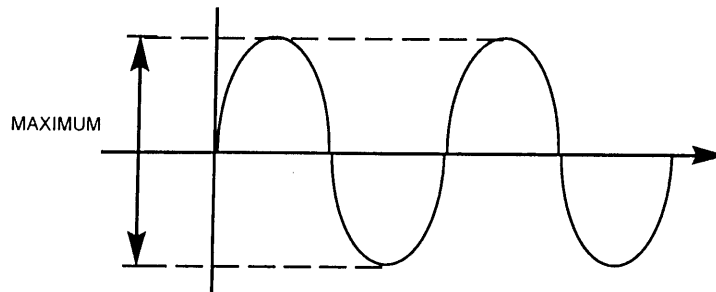


FIG.6

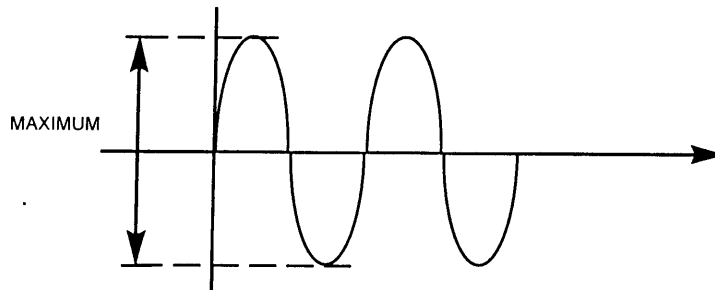
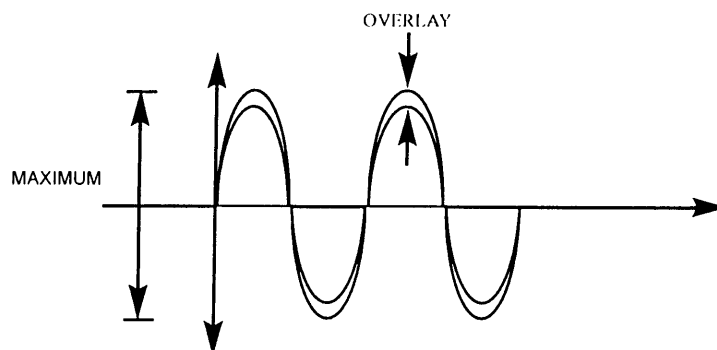


FIG.7

The above procedures are suitable only for IC TDA8416 circuit.

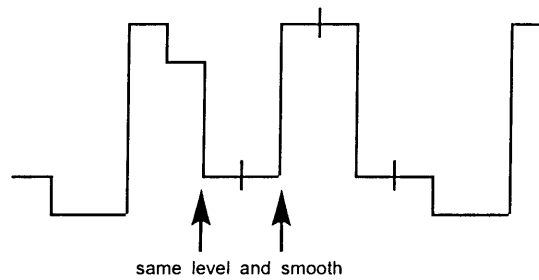
SEPARATION ALIGNMENT

1. Receive color bar pattern (with stereo sound, L=3KHz R=1KHz).
2. Connect oscilloscope to PIN1 at CN201 and ground.
3. Adjust Volume control to maximum obtain a waveform no distortion.
4. Adjust VR002 or VR060 (for IC TDA8416) to obtain waveform as follow.

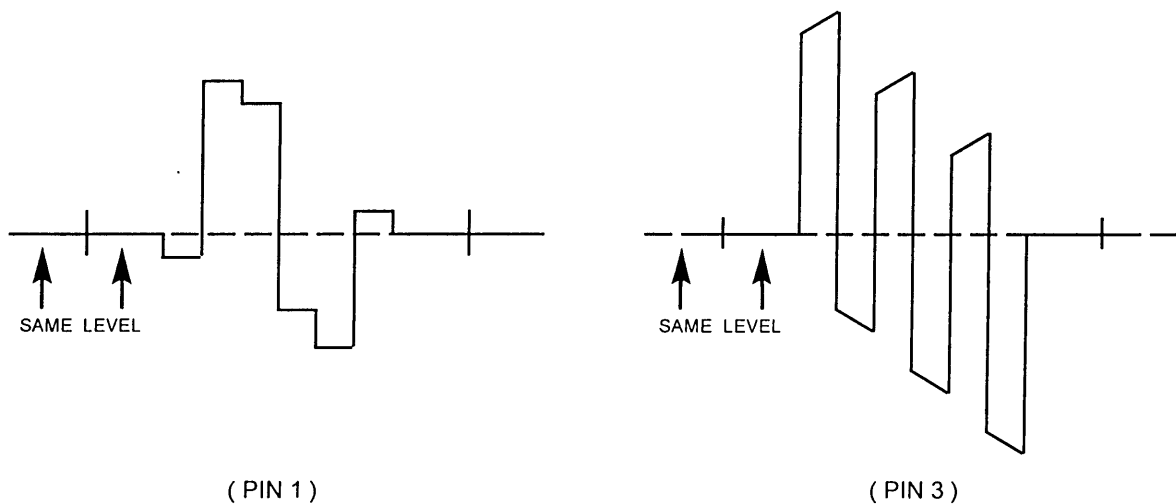


SECAM COLOUR ADJUSTMENT

1. Receive a secam colour bar signal (input signal 70dB \pm 10dB.)
2. Connect oscilloscope to PIN19 on IC307.
3. Adjust colour control to maximum.
4. Adjust T305 to get the waveform as follows.



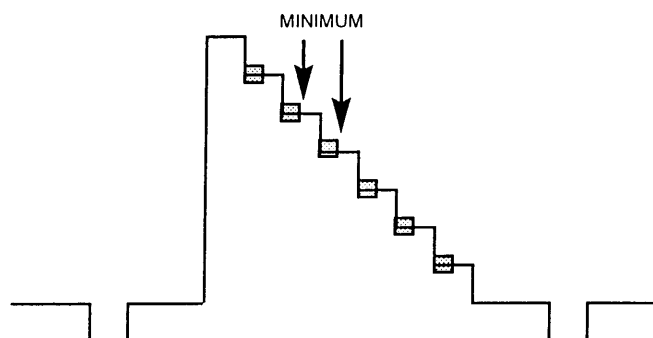
5. Connect scope to PIN1 and PIN3 on IC307.
6. Adjust T301 and VR301 to get the waveform as follows.



SECAM CHROMA TRAP ADJUSTMENT

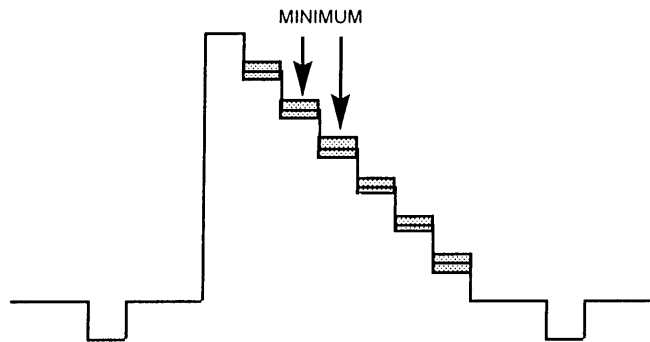
1. Receive secam color bar signal (input signal 70dB +10dB.)
2. Connect scope to PIN20 on IC304.
3. Adjust colour control to minimum.
4. Adjust T302 to get the waveform as follow.

Remark: Frequency of marker point can have \pm 0.2% tolerance.



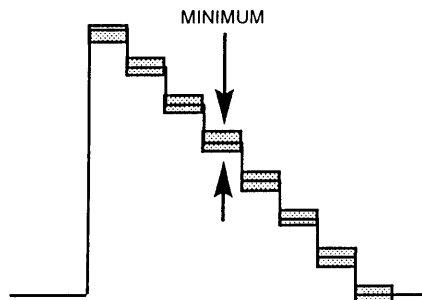
NTSC CHROMA TRAP ADJUSTMENT

1. Receive a NTSC colour bar signal from AV input.
2. IC304 PIN20.
3. Adjust color control to minimum.
4. Adjust T303 to get the waveform as follow.



PAL CHROMA TRAP ADJUSTMENT (FOR DK/I)

1. Receive PAL colour bar signal (input signal 70dB \pm 10dB.)
2. Connect scope to PIN20 on IC304.
3. Adjust colour control to minimum.
4. Adjust T302 to get the waveform as follow.



PAL CHROMA ALIGNMENT (PAL ONLY)

1. Connect OSC to PIN15 of IC307 through a 10K \pm 5% resistor.
2. Receive a PAL colour bar signal (input signal 70dB \pm 10dB.)
3. Adjust T305 to get a maximum amplitude waveform.

Remark: All frequency of marker can have \pm 0.2% tolerance.

B+ ADJUSTMENT

1. Connect a digital volt meter to TPB+ and ground.
2. Set Brightness, contrast and colour to minimum the screen just be seen.
3. Adjust VR301 and screen volume on FBT to brightest bar can just be screen.
4. Adjust VR901 and obtain a reading of 143V \pm 1V.

HORIZONTAL CIRCUIT ADJUSTMENT

1. Receive Monoscope Pattern input signal 70dB \pm 10dB.
2. Connect terminal 25 PIN of IC102 and the ground with the Elect.cap 10uF / 16V +10%.
3. Adjust VR103 to obtain the picture running at centre.
4. Adjust VR102 to obtain the picture at centre.

VERTICAL CIRCUIT ADJUSTMENT

1. Receive the Monoscope Pattern.
2. Adjust V - size (VR401) to obtain a normal picture.

WHITE BALANCE ALIGNMENT STEP

(degauss the picture by degaussing coil if necessary)

1. Set the brightness, contrast, screen and picture control to minimum value.
2. Turn VR501 to middle position. Turn VR502, 503, 504, 505 to minimum position.
3. Receive a monoscope or Philips pattern, input signal 70dB \pm 10dB.
4. Connect a digital meter between Red Gun and Ground on the CRT Board.
5. Adjust VR301 to obtain a CRT cut off voltage at 170V \pm 3V.
6. Adjust screen volume on FBT to brightest bar can just be screen.
7. Receive a black and white pattern, input signal 70dB \pm 10dB or video input 1Vp-p \pm 3dB.
8. Set the brightness and contrast to middle position.
9. Adjust VR501, 502, 503, 504, 505 to obtain a uniformly white picture (9300°K) \pm 3JND.

SUB - BRIGHTNESS ALIGNMENT

1. Receive a Philips pattern, input signal 70dB \pm 10dB.
2. Turn the brightness, contrast and colour to minimum.
3. Adjust VR301 until the brightest bar can just be screen.

FOCUS ALIGNMENT

1. Set the brightness and contrast to middle position.
2. Receive a monoscope pattern, input signal 70dB \pm 10dB.
3. Adjust focus control to obtain sharpest picture.

PAL EAST WEST CORRECTION ADJUSTMENT

1. Receive crosshatch pattern input signal 70dB \pm 10dB.
2. Turn the brightness, contrast to middle position.
3. Adjust VR402 to get a normal regular picture.
4. Adjust VR403 to get a proper horizontal width.

NTSC EAST WEST CORRECT ADJUSTMENT

1. Receive crosshatch pattern and centre cross pattern, input signal.
2. Turn the brightness, contrast to middle position.
3. Adjust VR404 to get a normal regular picture.

AGC ALIGNMENT

1. Receive monoscope pattern at CH69 (UHF) and input field strength (tuner input signal table show as below).
2. Connect a digital meter between the tuner AGC terminal and ground.
3. Adjust the AGC variable resistor (VR201) to the MAXIMUM position (clockwise) and then adjust the VR anti-clockwise until the voltage drop down ≥ 0.4 .

Remark: (1) the voltage drop down must be close to 0.4V.
 (2) No noise on the picture.

| TUNER MODEL NO. | RF INPUT SIGNAL(dB) | TUNER MODEL NO. | RF INPUT SIGNAL(dB) |
|-----------------|---------------------|--------------------|---------------------|
| ENV598B7F2 | 62±2dB | OSCAR 2900KKC | 60±2dB |
| UVC6201-RC | 57±2dB | HBC3300KHC | 60±2dB |
| UVC8303-RW | 57±2dB | TBD1CAB14 | 60±2dB |
| UVL1812-AW | 57±2dB | TECC1986VAO618 | 60±2dB |
| UVC1401-EW | 57±2dB | TBD1-HYPV15V | 60±2dB |
| TDQ-5-32 | 57±3dB | UVE33-W24/R16-8649 | 60±2dB |
| TDQ-8-12 | 57±3dB | UVE50-AW04D | 60±2dB |
| VISHZUZ51 | 60±2dB | | |

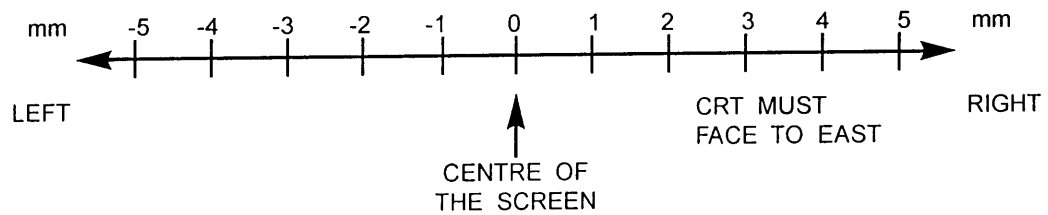
HIGH POT TESTING

1. Short the LINE CORD L - pole and N - pole.
2. Turn on the power switch of the TV set.
3. The High Pot Tester (-) connect to the L and N poly and (+) connect to the metal parts of cabinet.

Remark: The high pot tester can have $\leq \pm 3\%$ tolerance.

| STAFETY STD. | CONDITION | TEST SYANDARD | TEST STANDARN FOR PRODUCTION |
|----------------|-----------|-------------------|---|
| VDE, SAA | | 3.0KV 10mA / 1MIN | ≥ 3.5 KV ≤ 10 mA / ≥ 10 SEC. |
| BS | | 4.0KV 10mA / 1MIN | ≥ 4.0 KV ≤ 10 mA / ≥ 10 SEC. |
| CHINA STANDARD | | 3.0KV 10mA / 1MIN | ≥ 3.3 KV ≤ 5 mA / ≥ 6 SEC. |

| DISTRICT | CENTRE (mm) POSITION | LIMIT (mm) | SCANNING SIZE (%) | SCANNING SIZE LIMIT (%) |
|----------|-------------------------|------------|----------------------|-------------------------------|
| THAILAND | -1 | 0 ~ -2 | 90 | 88 ~ 92 |
| FRANCE | +3 | 0 ~ +5 | 90 | 88 ~ 94 |
| GERMANY | +3 | 0 ~ +5 | 90 | 90 ~ 95 |
| *GROUP A | -2 | -5 ~ -1 | 90 | 88 ~ 94 |
| *GROUP B | 0 | -2 ~ +2 | 90 | 88 ~ 94 |
| *GROUP C | +3 | 0 ~ +5 | 90 | 88 ~ 94 |



- REMARK :
1. SUITABLE FOR 14" OR ABOVE TV.
 2. Adjust the centre position must take the upper side of monoscope pattern for standard.
 3. Group A : AUSTRALIA, NEW ZEALAND, TAHITI.
 4. Group B : HONG KONG, CHINA, AMERICA, CANADA, MALAYSIA, MEXICO.
 5. Group C : ENGLAND, ITALY, GERMANY, RUSSIA, SWITZERLAND, JUGOSLAVIA, SPANISH.
If the above countries are not include, please consult to Engineering Dept.

| VOLTAGE TABLE FOR TRANSISTOR (ONLY FOR REFERENCE) | | | | | | | | | | | | |
|---|-------|-------|-------|---------------|-------|-------|-------|--|--|--|--|--|
| LOCATION \ TR | B (V) | C (V) | E (V) | LOCATION \ TR | B (V) | C (V) | E (V) | | | | | |
| Q101 | 10.2 | 10.9 | 11 | Q307 | 10 mV | 11.1 | 0 | | | | | |
| | 11.1 | 0 | 11.1 | Q308 | 10 mV | 11.1 | 0 | | | | | |
| Q102 | 10.9 | 3 mV | 11 | Q401 | 0.4 | 8.4 | 0 | | | | | |
| | 11 | 3mV | 11.1 | Q402 | -0.1 | 113 | 0 | | | | | |
| Q103 | 0.6 | 5mV | 0 | Q403 | 1.7 | 10.9 | 0.1 | | | | | |
| | 30 mV | 11 | 0 | Q404 | 10.8 | 0.6 | 11.4 | | | | | |
| Q104 | 36 mV | 11 | 0 | Q405 | 0.6 | 9.1 | 11.4 | | | | | |
| | 36 mV | 11 | 0 | Q406 | 10 mV | 1.7 | 1.2 | | | | | |
| Q105 | 1 | 8 | 0.3 | Q501 | 3.55 | 123.0 | 3.0 | | | | | |
| Q106 | 12 mV | 2.4 | 0 | Q502 | 3.5 | 126.0 | 3.0 | | | | | |
| Q107 | 30 mV | 11 | 0 | Q503 | 3.5 | 137.6 | 3.0 | | | | | |
| | 0.64 | 46 mV | 0 | Q601 | 0.6 | 1.1 | 0 | | | | | |
| Q108 | 11 | 0.1 | 11 | Q602 | 0.6 | 56 mV | 3 mV | | | | | |
| | 10.2 | 11 | 11.1 | Q603 | 8.6 | 10.9 | 8.3 | | | | | |
| Q109 | 3.7 | 11 | 3.1 | Q604 | 2 mV | 0.25 | 0 | | | | | |
| Q201 | 18.6 | 18 | 18 | Q605 | 0.26 | 1.1 | 0 | | | | | |
| Q302 | 1.9 | 1.7 | 0 | Q905 | 0.6 | 0.6 | 0 | | | | | |
| Q303 | 42 | 80.8 | 0 | Q909 | -36.4 | 202 | -35 | | | | | |
| Q304 | 3.8 | 11.1 | 3.1 | Q910 | -31 | -30 | -31 | | | | | |
| Q305 | 50 mA | 11.1 | 10 mV | Q911 | -26 | -30 | -31 | | | | | |
| Q306 | -3 | 10.5 | 0 | Q912 | -22 | -18.4 | -30 | | | | | |

NOTE : VOLTAGE ARE TAKEN UNDER TUNED CONDITION WITH

CONTRAST : Maximum Position
 BRIGHTNESS : Maximum Position
 COLOR : Maximum Position
 SIGNAL INPUT : 70dB ± 10dB
 CHANNEL SETTING : The Last Channel of UHF High
 SIGNAL PATTERN : Colour Bar

| VOLTAGE TABLE FOR IC (ONLY FOR REFERENCES) | | | | | | |
|--|-----------|-----------|-----------|-----------|-----------|-----------|
| PIN NO. / SYMBOL | IC801 (V) | IC802 (V) | IC804 (V) | IC102 (V) | IC101 (V) | IC401 (V) |
| 1 | 5 | NC | GEN | 5.1 | 1.7 | 2.2 |
| 2 | 1.8 | 4.2 | 4.2 | 2.8 | 2.1 | 0.00 |
| 3 | 1.9 | 2.2 | 4.3 | 3.7 | 2.5 | 1.6 |
| 4 | 0.03 | 2.2 | NC | 3.4 | 0.937 | 0.00 |
| 5 | GEN | 3.8 | NC | 3.9 | 1.82 | 0.13 |
| 6 | 4.9 | 1.3 | NC | 0.0 | 2.17 | 25.0 |
| 7 | 2.2 | 1.2 | NC | 11.5 | 2.17 | 1.9 |
| 8 | 2.4 | 3.6 | NC | 5.5 | 1.8 | 4.35 |
| 9 | 2.5 | 3.6 | NC | 5.5 | 1.8 | 24.34 |
| 10 | 5.0 | 3.7 | NC | 2.4 | 4.1 | |
| 11 | GEN | 0 | NC | 1.88 | 4.1 | |
| 12 | 2.1 | 0.3 | 5.0 | 2.46 | 2.79 | |
| 13 | 5 | 4.2 | GEN | 3.0 | 0.04 | |
| 14 | GEN | GND | GEN | 1.5 | 1.67 | |
| 15 | 0.42 | 0.6 | 2.3 | 2.29 | 1.77 | |
| 16 | 0.5 | 0.5 | 2.0 | 0.0 | 2.95 | |
| 17 | 0.4 | 0.5 | 0 | 3.5 | 0.03 | |
| 18 | 3.8 | 0.3 | GEN | 6.28 | 0.00 | |
| 19 | 4.5 | 0.5 | NC | 6.18 | 5.15 | |
| 20 | 0.8 | GND | NC | 5.6 | 1.78 | |
| 21 | 2.5 | 4.2 | NC | 5.6 | | |
| 22 | NC | 2.5 | NC | 9.4 | | |
| 23 | 4.3 | 0.8 | GEN | 2.8 | | |
| 24 | 4.3 | 0.8 | NC | 2.9 | | |
| 25 | GEN | 0.8 | NC | 4.5 | | |
| 26 | 0.5 | 5.0 | GEN | 0.787 | | |
| 27 | 0.5 | 5.0 | NC | 1.18 | | |
| 28 | 0.5 | 5.0 | 5.0 | 3.3 | | |
| 29 | 0.3 | | | | | |
| 30 | 0.5 | | | | | |
| 31 | 4.2 | | | | | |
| 32 | 0.3 | | | | | |
| 33 | 0 | | | | | |
| 34 | 3.7 | | | | | |
| 35 | 3.6 | | | | | |
| 36 | 3.6 | | | | | |
| 37 | 1.2 | | | | | |
| 38 | 1.3 | | | | | |
| 39 | 3.8 | | | | | |
| 40 | 2.2 | | | | | |
| 41 | 2.2 | | | | | |
| 42 | 4.2 | | | | | |
| 43 | 4.2 | | | | | |
| 44 | 0.8 | | | | | |
| 45 | 0.8 | | | | | |
| 46 | 0.8 | | | | | |
| 47 | 2.5 | | | | | |
| 48 | 5.0 | | | | | |
| 49 | | | | | | |
| 50 | | | | | | |

| SYMBOL / PIN NO. | | IC901 (WIDE VOLT PW P.C.B) (V) |
|------------------|--|--------------------------------|
| 1 | | 306 |
| 2 | | 0 |
| 3 | | 0 |
| 4 | | 2 |
| 5 | | 0 |
| 6 | | 0 |
| 7 | | 0 |
| 8 | | -0.5 |
| 9 | | -1.6 |
| 10 | | |
| 11 | | |
| 12 | | |
| 13 | | |

NOTE : VOLTAGE ARE TAKEN UNDER TUNED CONDITION WITH

CONTRAST : Maximum Position
 BRIGHTNESS : Maximum Position
 COLOR : Maximum Position
 SIGNAL INPUT : 70dB ± 10dB
 CHANNEL SETTING : The Last Channel of UHF High
 SIGNAL PATTERN : Colour Bar

| VOLTAGE TABLE FOR IC (ONLY FOR REFERENCES) | | | | | | | |
|--|--------|--------------|--------------|--------------|--------------|--------------|--------------|
| PIN NO. | SYMBOL | IC302 (V) | IC303 (V) | IC304 (V) | IC305 (V) | IC306 (V) | IC307 (V) |
| 1 | | 3.649 | 5.2 | 3.29 | 4.1 | 5.56 | 6.5 |
| 2 | | 0 | 0 | 11.8 | 0.03 | 0.00 | 7.2 |
| 3 | | 3.65 | 4.07 | 8.2 | 3.39 | 0.00 | 6.5 |
| 4 | | 3.65 | 0.00 | 0.00 | 3.39 | 0.00 | 7.22 |
| 5 | | 3.65 | 3.966 | 7.8 | 2.5 | 0.627 | 9.65 |
| 6 | | 3.68 | 3.904 | 0.1 | 4.8 | 0.00 | 9.6 |
| 7 | | 3.68 | 0.00 | 0.00 | 4.18 | 0.87 | 4.34 |
| 8 | | 0.004 | 0.00 | 0.00 | 4.26 | 0.00 | 3.45 |
| 9 | | 0.115 | 4.3 | 4.3 | 4.97 | 5.5 | 0.00 |
| 10 | | 0.01 | 4.06 | 4.1 | 11.4 | 0.00 | 4.38 |
| 11 | | 3.027 | 0.39 | 2.9 | 2.34 | 3.01 | 0.00 |
| 12 | | 0.0 | 5.28 | 0.00 | 10.0 | 3.01 | 2.32 |
| 13 | | 2.99 | 5.3 | 0.00 | 0.00 | 0.00 | 11.5 |
| 14 | | 11.838 | 0.00 | 4.06 | 1.2 | 1.36 | 5.7 |
| 15 | | 0.016 | 4.63 | 4.09 | 7.4 | 0.00 | 3.36 |
| 16 | | 2.98 | 4.6 | 2.3 | 3.7 | 1.37 | 7.9 |
| 17 | | | 3.46 | 2.06 | 0.00 | | 2.5 |
| 18 | | | 0.00 | 0.00 | 0.00 | | 7.6 |
| 19 | | | 0.00 | 3.36 | | | 2.8 |
| 20 | | | 3.8 | 3.33 | | | 7.68 |
| 21 | | | 0.00 | | | | 2.7 |
| 22 | | | 4.578 | | | | 5.47 |
| 23 | | | 0.00 | | | | 7.2 |
| 24 | | | 5.315 | | | | 1.26 |
| 25 | | | | | | | |
| 26 | | | | | | | |
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NOTE : VOLTAGE ARE TAKEN UNDER TUNED CONDITION WITH

CONTRAST : Maximum Position
 BRIGHNESS : Maximum Position
 COLOR : Maximum Position
 SIGNAL INPUT : 70dB ± 10dB
 CHANNEL SETTING : The Last Channel of UHF High
 SIGNAL PATTERN : Colour Bar

| VOLTAGE TABLE FOR IC (ONLY FOR REFERENCES) (FOR STEREO TDA3803A) | | | | | | |
|---|--------|----------------|----------------|--|--|--|
| PIN NO. | SYMBOL | IC001 (V) | IC002 (V) | | | |
| 1 | | 5.6 | NC | | | |
| 2 | | 5.6 | NC | | | |
| 3 | | 7.4 | NC | | | |
| 4 | | 11.1 | NC | | | |
| 5 | | 7.3 | NC | | | |
| 6 | | 7.3 | GND | | | |
| 7 | | 7.3 | GND | | | |
| 8 | | 7.3 | GND | | | |
| 9 | | 0.06 | 9.3 | | | |
| 10 | | NC | 9.3 | | | |
| 11 | | 5.6 | GND | | | |
| 12 | | GND | GND | | | |
| 13 | | 11.2 | 0.01 | | | |
| 14 | | 9.2 | 11.2 | | | |
| 15 | | 9.2 | 11.2 | | | |
| 16 | | GND | 11.2 | | | |
| 17 | | 5.0 | | | | |
| 18 | | GND | | | | |
| 19 | | 5.0 | | | | |
| 20 | | NC | | | | |
| 21 | | NC | | | | |
| 22 | | 5.5 | | | | |
| 23 | | 5.5 | | | | |
| 24 | | 5.5 | | | | |
| 25 | | 5.5 | | | | |
| 26 | | 5.5 | | | | |
| 27 | | 5.5 | | | | |
| 28 | | 7.2 | | | | |
| 29 | | | | | | |
| 30 | | | | | | |
| 31 | | | | | | |
| 32 | | | | | | |
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NOTE : VOLTAGE ARE TAKEN UNDER TUNED CONDITION WITH

| | | |
|-----------------|---|------------------------------|
| CONTRAST | : | Maximum Position |
| BRIGHTNESS | : | Maximum Position |
| COLOR | : | Maximum Position |
| SIGNAL INPUT | : | 70dB ± 10dB |
| CHANNEL SETTING | : | The Last Channel of UHF High |
| SIGNAL PATTERN | : | Colour Bar |

| VOLTAGE TABLE FOR IC (ONLY FOR REFERENCES) (FOR NICAM IC TDA7280) | | | | | | | |
|--|--------|--------------|--------------|--------------|--------------|--------------|--------------|
| PIN NO. | SYMBOL | IC005 (V) | IC006 (V) | IC007 (V) | IC008 (V) | IC009 (V) | IC010 (V) |
| 1 | | 2.1 | 2.0 | 5.2 | 5.2 | 2.6 | 5.2 |
| 2 | | 0.78 | GND | 1.4 | 1.4 | 2.6 | NC |
| 3 | | 0.61 | 2.3 | 1.4 | 1.4 | 2.6 | NC |
| 4 | | 0.61 | 5.3 | GND | GND | GND | 5.2 |
| 5 | | 0.61 | 3.9 | 5.2 | 5.2 | 5.2 | GND |
| 6 | | GND | 4.0 | 5.2 | 5.2 | 1.4 | 5.2 |
| 7 | | GND | 4.0 | 5.2 | 5.2 | 1.4 | GND |
| 8 | | GND | 3.9 | 11.4 | 11.4 | 1.4 | 2.6 |
| 9 | | 3.1 | 1.2 | | | | 2.6 |
| 10 | | 7.1 | 2.1 | | | | 2.6 |
| 11 | | 0.61 | 4.2 | | | | GND |
| 12 | | 2.1 | 5.3 | | | | GND |
| 13 | | 0.78 | 4.2 | | | | 5.2 |
| 14 | | 0.78 | GND | | | | GND |
| 15 | | 0.78 | 2.3 | | | | 4.8 |
| 16 | | 11.3 | 2.6 | | | | 2.3 |
| 17 | | | NC | | | | 2.2 |
| 18 | | | NC | | | | 5.2 |
| 19 | | | GND | | | | 2.6 |
| 20 | | | 3.3 | | | | NC |
| 21 | | | | | | | 2.3 |
| 22 | | | | | | | NC |
| 23 | | | | | | | 5.2 |
| 24 | | | | | | | NC |
| 25 | | | | | | | GND |
| 26 | | | | | | | NC |
| 27 | | | | | | | 0.03 |
| 28 | | | | | | | 5.2 |
| 29 | | | | | | | |
| 30 | | | | | | | |
| 31 | | | | | | | |
| 32 | | | | | | | |
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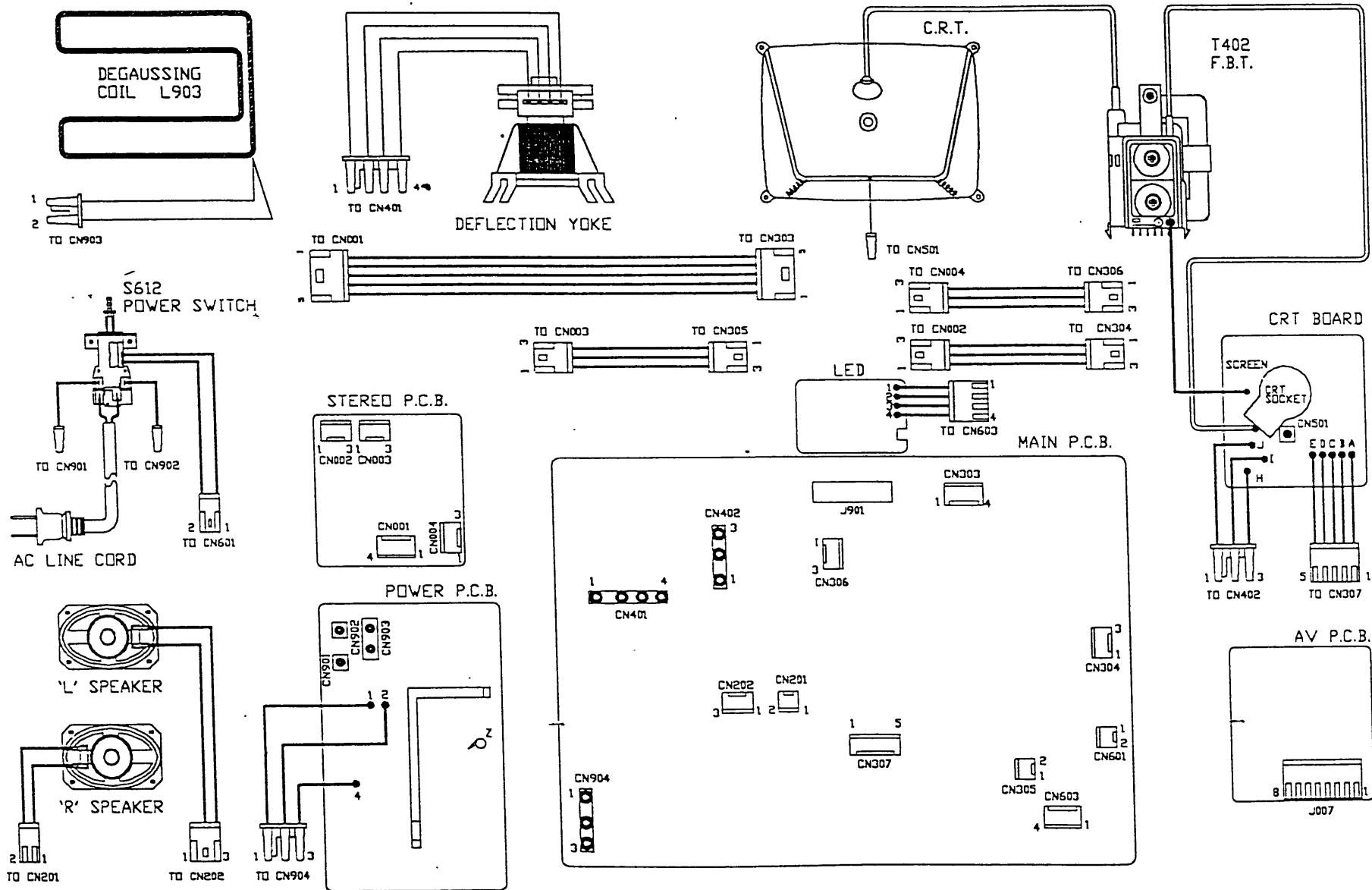
NOTE : VOLTAGE ARE TAKEN UNDER TUNED CONDITION WITH

CONTRAST : Maximum Position
 BRIGHNESS : Maximum Position
 COLOR : Maximum Position
 SIGNAL INPUT : 70dB ± 10dB
 CHANNEL SETTING : The Last Channel of UHF High
 SIGNAL PATTERN : Colour Bar

| VOLTAGE TABLE FOR IC (ONLY FOR REFERENCES) (FOR NICAM IC TDA7282, IC001, IC002) (FOR G.STEREO IC TDA8416, IC060) | | | | | | |
|---|--------|----------------|----------------|----------------|----------------|--|
| PIN NO. | SYMBOL | IC601 (V) | IC001 (V) | IC002 (V) | IC060 (V) | |
| 1 | | 4.6 | 2.49 | 2.427 | 5.07 | |
| 2 | | 0.08 | 5.21 | GND | 4.96 | |
| 3 | | 1.759 | 5.07 | 2.282 | 5.97 | |
| 4 | | 2.528 | 5.07 | 5.33 | 1.443 | |
| 5 | | 2.527 | 0.011 | 0.03 | GND | |
| 6 | | 0.03 | 5.18 | 4.12 | 3.212 | |
| 7 | | 0.03 | 4.97 | 4.13 | 3.210 | |
| 8 | | 3.66 | 4.85 | 3.95 | 3.211 | |
| 9 | | 2.62 | GND | 3.957 | 3.212 | |
| 10 | | 5 | 2.429 | 2.223 | 3.213 | |
| 11 | | GND | 2.383 | 4.17 | 3.26 | |
| 12 | | 4 | 2.37 | 0.007 | 3.258 | |
| 13 | | 4.9 | 0.012 | 4.18 | 3.9 | |
| 14 | | 4.96 | 0.418 | GND | 2.89 | |
| 15 | | 4.96 | 2.462 | 2.502 | 11.12 | |
| 16 | | 4.96 | 2.427 | 4.54 | GND | |
| 17 | | 4.96 | 2.43 | 4.55 | 3.252 | |
| 18 | | 0.1 | GND | 4.55 | 11.12 | |
| 19 | | 4.97 | 2.43 | GND | 5.07 | |
| 20 | | 4.98 | 0.019 | 3.287 | GND | |
| 21 | | GND | 0.019 | | | |
| 22 | | 0.005 | 0.014 | | | |
| 23 | | 0.007 | 2.383 | | | |
| 24 | | 0.015 | 0.005 | | | |
| 25 | | 0.016 | 5.04 | | | |
| 26 | | 0.443 | 4.97 | | | |
| 27 | | -0.073 | 4.98 | | | |
| 28 | | 5 | 2.5 | | | |
| 29 | | 5 | 2 | | | |
| 30 | | GND | 1.97 | | | |
| 31 | | 2.46 | 2.114 | | | |
| 32 | | 2.119 | | | | |
| 33 | | 5 | | | | |
| 34 | | 1.32 | | | | |
| 35 | | 4.98 | | | | |
| 36 | | 0.031 | | | | |
| 37 | | 4.99 | | | | |
| 38 | | GND | | | | |
| 39 | | 5.01 | | | | |
| 40 | | 5 | | | | |
| 41 | | 0.115 | | | | |
| 42 | | 5 | | | | |
| 43 | | | | | | |
| 44 | | | | | | |

NOTE : VOLTAGE ARE TAKEN UNDER TUNED CONDITION WITH

CONTRAST : Maximum Position
 BRIGHNESS : Maximum Position
 COLOR : Maximum Position
 SIGNAL INPUT : 70dB ± 10dB
 CHANNEL SETTING : The Last Channel of UHF High
 SIGNAL PATTERN : Colour Bar



WIRING DIAGRAM

GT-8828 PAL-SECAM-BG(INDONISA)
 W/GER.STEREO
 CHECK-BY: LEE WAI HUNG
 PART NOS.:88280401

MODEL NO.: CT-M596SR Chassis type C GT-9425

| Part Number | Description | Qty |
|-------------|--|-----|
| 10780045546 | 455K HZ RESONATOR "WEI HAW" | 1 |
| 11310100517 | CARBON FILM RESISTOR 100 OHM 1/16W +-5% | 2 |
| 11310200517 | CARBON FILM RESISTOR 1K OHM 1/16W +-5% | 1 |
| 11310300517 | CARBON FILM RESISTOR 10K OHM 1/16W +-5% | 1 |
| 11310900517 | CARBON FILM RESISTOR 1 OHM 1/16W +-5% | 1 |
| 11347300517 | CARBON FILM RESISTOR 47K OHM 1/16W +-5% | 1 |
| 11368200517 | CARBON FILM RESISTOR 6.8K OHM 1/16W +-5% | 1 |
| 12747604203 | ELECT. CAP. 47 MFD 16V +-20% | 1 |
| 13060010100 | INFRARED EMITTER EL-1L1 KODENSHI | 1 |
| 13121071929 | TRANSISTOR 2SA719R/S MATSUSHITA | 1 |
| 13123094500 | TRANSISTOR 2SC945 NEC | 1 |
| 13380301033 | I.C. SAA3010T PHILIPS | 1 |
| 17272600099 | BARE WIRE 54MM | 0.1 |
| 190R6330002 | REMOTE P.C.B. (140896) | 1 |
| 51626040810 | SELF-TAPPING SCREW 2.6 X 8 P/T (HARDEN) | 2 |
| 774R6330100 | BATTERY SPRING (+VE) | 1 |
| 774R6330200 | BATTERY SPRING (-VE) | 1 |
| 774R6330300 | BATTERY SPRING (+-VE) | 1 |
| 81004110413 | POLYBAG 4" X 11" X 0.04MM W/RE-CYCLING MARK | 1 |
| 849R6330100 | KEY PAD {FULL 40 KEYS} | 1 |
| 892R6330102 | DIAL KEY PLATE - ENG STD W/RED /YELLOW/GREEN/BLUE/SILVER SS | 1 |
| 900R6330103 | HANDSET TOP CABINET -MATT BLK. SPRAYED W/SILVER 8001C S.S. | 1 |
| 902R6330103 | HANDSET BOTTOM CABINET - MATT BLACK SPRAYED | 1 |
| 910R6330115 | HANDSET BATTERY DOOR - TEAC DESIGN (RC-653)(CT-M596SR) BLK | 1 |
| 973R6330100 | VOLUME/CHANNEL KNOB - MOULDED BLACK | 1 |
| 00212522648 | 25" CRT #A59KYL220X06S S/H DY# 153-144R (AUSTRALIA) GOLDSTAF | 1 |
| 00313142402 | TUNER OSCAR UVE33-W24/R16-3649 MITSUMI (HIGH JACK) | 1 |
| 00860025105 | DEGAUSSING COIL 60T (W/FIVE LAYERS OF TAPE) | 1 |
| 10773150000 | SAW FILTER TSB-5308U (SANYO) | 1 |
| 10773891600 | SAW FILTER TSF-5316 SANYO | 1 |
| 11315310517 | CARBON FILM RESISTOR 15K OHM 1/4W +-5% | 2 |
| 11322310167 | METAL FILM RESISTOR 22K OHM 1/4W +-1% | 1 |
| 16618702740 | SPEAKER 4" X 2 3/4" 8 OHM 7W #TCL# | 2 |
| 17155008402 | 84" AC LINE CORD (END-CUT)SAA APPW/7.5A PLUG. | 1 |
| 18622750314 | BATTERY 3A | 2 |
| 19130101907 | 3 PIN SOCKET ASS'Y L=30MM (PIN 2,3 W/RESISTOR 1K OHM 1/4W) | 1 |
| 19140100507 | 4 PIN SOCKET ASS'Y L=450MM | 1 |
| 52493290101 | CRT MOUNTING SCREW 7 X 40 VP (HARDEN) | 4 |
| 61094250118 | GIFT BOX - TEAC DESIGN (CT-M596SR) | 1 |
| 66323058196 | SERIAL NO.LABEL - OC:GT-581/96 | 2 |
| 66994250121 | RATING LABEL - TEAC DESIGN (CT-M596SR) | 1 |
| 67094250048 | I/MANUAL - TEAC DESIGN (CT-M596SR) 40PROG. | 1 |
| 67892210302 | TELETEXT COMPLEMENT - TEAC DESIGN | 1 |
| 67892210903 | EASY TUNE CARD (A) - TEAC (A) DESIGN | 1 |
| 67893131502 | TOTAL CARE LABEL - TEAC DESIGN (BLK & WHITE) | 1 |
| 67894210159 | POLYBAG WARNING LABEL - TEAC DESIGN | 1 |
| 67894250207 | SCREEN STICKER - TEAC DESIGN (CT-M296/SR) | 1 |
| 69092213901 | WARRANTY CARD- TEAC (A) DESIGN | 1 |
| 69394250103 | EAN CODE LABEL - 9313060007614 | 1 |
| 70394250105 | SPEAKER GRILLE - MATT BLACK DOUBLE SIDE W/SPRAY | 2 |
| 83423080200 | RUBBER WASHER OD=23, ID=8, T=2 | 4 |

| | | | |
|-------------|---------------------------------|--------------------------------|----|
| 88493290501 | PRESET PLATE - BLACK W/L.GREY | S.S. ENG STD (14 KEY HOLES) | 1 |
| 88493293402 | JACK COVER PLATE - TEAC DESIGN | | 1 |
| 90094250205 | FRONT CABINET - SONY GERY | (426U GREY) | 1 |
| 902942511U1 | BACK CABINET - BLK MOULD (UL) | | 1 |
| 91793290213 | REMOTE LENS - T.RED ENG STD | FOR TEAC | 1 |
| 9199329020C | P/DOOR - TEAC DESIGN W/GREY SS | CABLE READY WORDING CT-M596 | 1 |
| 980932922U0 | JACK PLATE W/BRASS INSERT | (521-882001-00 2PCS/SET) | 1 |
| 9868828010U | NAME PLATE - TEAC (A) DESIGN | (BIG SIZE) | 1 |
| 00122990105 | FLYBACK TRANSFORMER F27901-02 | GOLDSTAR | 1 |
| 01210234006 | SEMI-FIXED RESISTOR EVND8AA | 03B13 1KB | 2 |
| 01210434006 | SEMI-FIXED RESISTOR EVND8AA | 03B15 100KB | 1 |
| 01220233006 | SEMI-FIXED RESISTOR EVND2AA | 03B23 2KB | 5 |
| 01220334006 | SEMI-FIXED RESISTOR EVND8AA | 03B24 20KB | 2 |
| 01250234006 | SEMI-FIXED RESISTOR EVND8AA | 03B53 5KB | 3 |
| 01250334006 | SEMI-FIXED RESISTOR EVND8AA | 03B54 50KB | 2 |
| 10119100996 | HORIZONTAL DRIVE TRANSFORMER | (R1009) | 1 |
| 10128827095 | LINE FILTER LB28T270 | | 1 |
| 10149026094 | SWITCH POWER TRANSFORMER 28" | KB49C260 "HIGHLIGHT" | 1 |
| 10237060002 | TANK COIL / AFC COIL COILS | 707851 | 1 |
| 10267130002 | SOUND IF COIL. COILS 710256 | | 2 |
| 10267160002 | SOUND IF COIL KHC-823087 | "COILS" | 1 |
| 10277031002 | CHROMA FILTER KH-814657 | "COILS" | 1 |
| 10287050002 | DOSC COIL. COILS 707534 | | 1 |
| 10510010308 | FIXED INDUCTOR COIL 10 UH | + -10% AXIAL | 2 |
| 10515010102 | FIXED INDUCTIVE COIL 15UH 10% | | 1 |
| 10520110602 | CHOKER COIL 200UH 10% CH9012- | 201K (ELEC PRODUCT) | 2 |
| 10525010235 | LINEARITY COIL 25UH LX142242A | HIGHLIGHT | 1 |
| 10556010102 | FIXED INDUCTOR COIL 56uH + -10% | CW-560K-455-705111 | 3 |
| 10568910308 | FIXED INDUCTOR COIL 6.8 UH | + -10% AXIAL | 1 |
| 10582115606 | CHOKER COIL 820UH 0.37 OHM | HIGHLIGHT | 1 |
| 10582810302 | FIXED INDUCTIVE COIL 0.82UH | 10% AXIAL TYPE | 1 |
| 10582910308 | FIXED CONDUCTOR COIL 8.2 UH | + -10% AXIAL | 3 |
| 10621001201 | RELAY 12V OMIT-SS-112LM | ORIGINAL | 1 |
| 10710443066 | CHROMA TRAP CERAMIC FILTER | 4.43 MHZ WEI HAW | 1 |
| 10710550066 | SOUND TRAP CERAMIC FILTER | 5.5MHZ WEI HAW | 1 |
| 10730550016 | SOUND BYPASS CERAMIC FILTER | 5.5MHZ WEI HAW | 1 |
| 10730574016 | SOUND BYPASS CERAMIC FILTER | 5.74MHZ SFE-5.74MC MURATA | 1 |
| 11110320123 | VERIABLE RESISTOR 10K (EVU-E2A) | 20B14 MATSUSHITA) | 1 |
| 1111042812A | VERIABLE RES. W/CENTRE CHICK | 100K (VA09CVI U 20TMB100K HDK) | 1 |
| 11310010517 | CARBON FILM RESISTOR 10 OHM | 1/4W +-5% | 4 |
| 11310020512 | CARBON FILM RESISTOR 10 OHM | 1/2W +-5% | 1 |
| 11310050575 | METAL OXIDE FILM RESISTOR 10 | OHM 3W +-5% | 1 |
| 11310110517 | CARBON FILM RESISTOR 100 OHM | 1/4W +-5% | 6 |
| 11310110517 | CARBON FILM RESISTOR 100 OHM | 1/4W +-5% | 11 |
| 11310110517 | CARBON FILM RESISTOR 100 OHM | 1/4W +-5% | 3 |
| 11310130575 | METAL OXIDE FILM RESISTOR 100 | OHM 1W +-5% | 1 |
| 11310210517 | CARBON FILM RESISTOR 1K OHM | 1/4W +-5% | 11 |
| 11310210517 | CARBON FILM RESISTOR 1K OHM | 1/4W +-5% | 12 |
| 11310210517 | CARBON FILM RESISTOR 1K OHM | 1/4W +-5% | 7 |
| 11310230575 | METAL OXIDE FILM RESISTOR 1K | OHM 1W +-5% | 1 |
| 11310310167 | METAL FILM RESISTOR 10K OHM | 1/4W +-1% | 1 |
| 11310310517 | CARBON FILM RESISTOR 10K OHM | 1/4W +-5% | 9 |
| 11310310517 | CARBON FILM RESISTOR 10K OHM | 1/4W +-5% | 9 |
| 11310310517 | CARBON FILM RESISTOR 10K OHM | 1/4W +-5% | 9 |
| 11310310517 | CARBON FILM RESISTOR 10K OHM | 1/4W +-5% | 1 |
| 11310410517 | CARBON FILM RESISTOR 100K OHM | 1/4W +-5% | 3 |

| | | | |
|-------------|--------------------------------|-----------------|----|
| 11310430575 | METAL OXIDE FILM RESISTOR 100K | OHM 1W +-5% | 1 |
| 11310510167 | METAL FILM RESISTOR 1M OHM | 1/4W +-1% | 1 |
| 11310930575 | METAL OXIDE FILM RESISTOR 1 | OHM 1W +-5% | 1 |
| 11312030575 | METAL OXIDE FILM RESISTOR 12 | OHM 1W +-5% | 1 |
| 11312040575 | METAL OXIDE FILM RESISTOR 12 | OHM 2W +-5% | 1 |
| 11312110517 | CARBON FILM RESISTOR 120 OHM | 1/4W +-5% | 3 |
| 11312210517 | CARBON FILM RESISTOR 1.2K OHM | 1/4W +-5% | 9 |
| 11312220512 | CARBON FILM RESISTOR 1K2 OHM | 1/2W +-5% | 1 |
| 11312310517 | CARBON FILM RESISTOR 12K OHM | 1/4W +-5% | 2 |
| 11315010517 | CARBON FILM RESISTOR 15 OHM | 1/4W +-5% | 4 |
| 11315120512 | CARBON FILM RESISTOR 150 OHM | 1/2W +-5% | 2 |
| 11315210517 | CARBON FILM RESISTOR 1.5K OHM | 1/4W +-5% | 6 |
| 11315310517 | CARBON FILM RESISTOR 15K OHM | 1/4W +-5% | 4 |
| 11315340575 | METAL OXIDE FILM RESISTOR 15K | OHM 2W +-5% | 1 |
| 11315410517 | CARBON FILM RESISTOR 150K OHM | 1/4W +-5% | 3 |
| 11315420512 | CARBON FILM RESISTOR 150K OHM | 1/2W +-5% | 1 |
| 11315840575 | METAL OXIDE FILM RESISTOR 0.15 | OHM 2W +-5% | 1 |
| 11315990551 | WIRE WOUND CEMENT RESISTOR 1.5 | OHM 10W +-5% | 1 |
| 11318110517 | CARBON FILM RESISTOR 180 OHM | 1/4W +-5% | 1 |
| 11318210517 | CARBON FILM RESISTOR 1.8K OHM | 1/4W +-5% | 11 |
| 11318210517 | CARBON FILM RESISTOR 1.8K OHM | 1/4W +-5% | 2 |
| 11318310517 | CARBON FILM RESISTOR 18K OHM | 1/4W +-5% | 5 |
| 11318410517 | CARBON FILM RESISTOR 180K OHM | 1/4W +-5% | 3 |
| 11320260575 | METAL OXIDE FILM RESISTOR 2K | OHM 5W +-5% | 1 |
| 11322110517 | CARBON FILM RESISTOR 220 OHM | 1/4W +-5% | 5 |
| 11322130575 | METAL OXIDE FILM RESISTOR 220 | OHM 1W +-5% | 1 |
| 11322210167 | METAL FILM RESISTOR 2.2K OHM | 1/4W +-1% | 1 |
| 11322210517 | CARBON FILM RESISTOR 2.2K OHM | 1/4W +-5% | 5 |
| 11322310517 | CARBON FILM RESISTOR 22K OHM | 1/4W +-5% | 8 |
| 11322410517 | CARBON FILM RESISTOR 220K OHM | 1/4W +-5% | 2 |
| 11322910517 | CARBON FILM RESISTOR 2.2 OHM | 1/4W +-5% | 3 |
| 11322920512 | CARBON FILM RESISTOR 2.2 OHM | 1/2W +-5% | 1 |
| 11322940542 | FUSING RESISTOR 2.2 OHM 2W +-5 | % | 1 |
| 11322950575 | METAL OXIDE FILM RESISTOR 2.2 | OHM 3W +-5% | 1 |
| 11322960551 | WIRE WOUND CEMENT RESISTOR | 2.2 OHM 5W +-5% | 1 |
| 11327010517 | CARBON FILM RESISTOR 27 OHM | 1/4W +-5% | 1 |
| 11327040575 | METAL OXIDE FILM RESISTOR 27 | OHM 2W +-5% | 1 |
| 11327110517 | CARBON FILM RESISTOR 270 OHM | 1/4W +-5% | 1 |
| 11327210517 | CARBON FILM RESISTOR 2.7K OHM | 1/4W +-5% | 1 |
| 11327220512 | CARBON FILM RESISTOR 2.7K OHM | 1/2W +-5% | 5 |
| 11327310517 | CARBON FILM RESISTOR 27K OHM | 1/4W +-5% | 3 |
| 11327410517 | CARBON FILM RESISTOR 270K OHM | 1/4W +-5% | 1 |
| 11333110517 | CARBON FILM RESISTOR 330 OHM | 1/4W +-5% | 5 |
| 11333210217 | CARBON FILM RESISTOR 3.3K OHM | 1/4W +-2% | 5 |
| 11333210517 | CARBON FILM RESISTOR 3.3K OHM | 1/4W +-5% | 7 |
| 11333310517 | CARBON FILM RESISTOR 33K OHM | 1/4W +-5% | 8 |
| 11333410167 | METAL FILM RESISTOR 330K OHM | 1/4W +-1% | 1 |
| 11333410517 | CARBON FILM RESISTOR 330K OHM | 1/4W +-5% | 1 |
| 11333430575 | METAL OXIDE FILM RESISTOR 330K | OHM 1W +-5% | 1 |
| 11339050575 | METAL OXIDE FILM RESISTOR 39 | OHM 3W +-5% | 1 |
| 11339060575 | METAL OXIDE FILM RESISTOR 39 | OHM 5W +-5% | 1 |
| 11339110517 | CARBON FILM RESISTOR 390 OHM | 1/4W +-5% | 3 |
| 11339210517 | CARBON FILM RESISTOR 3.9K OHM | 1/4W +-5% | 1 |
| 11339310517 | CARBON FILM RESISTOR 39K OHM | 1/4W +-5% | 2 |
| 11347010517 | CARBON FILM RESISTOR 47 OHM | 1/4W +-5% | 2 |
| 11347110517 | CARBON FILM RESISTOR 470 OHM | 1/4W +-5% | 4 |

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| 11347210517 | CARBON FILM RESISTOR 4.7K OHM | 1/4W +-5% | 11 |
| 11347310517 | CARBON FILM RESISTOR 47K OHM | 1/4W +-5% | 4 |
| 11347910517 | CARBON FILM RESISTOR 4.7 OHM | 1/4W +-5% | 2 |
| 11351110517 | CARBON FILM RESISTOR 510 OHM | 1/4W +-5% | 1 |
| 11356110517 | CARBON FILM RESISTOR 560 OHM | 1/4W +-5% | 5 |
| 11356210517 | CARBON FILM RESISTOR 5.6K OHM | 1/4W +-5% | 6 |
| 11356310517 | CARBON FILM RESISTOR 56K OHM | 1/4W +-5% | 2 |
| 11356521092 | CARBON COMPOSITION RESISTOR | 5.6M OHM 1/2W +-10% | 2 |
| 11368110517 | CARBON FILM RESISTOR 680 OHM | 1/4W +-5% | 2 |
| 11368210217 | CARBON FILM RESISTOR 6.8K OHM | 1/4W +-2% | 1 |
| 11368210517 | CARBON FILM RESISTOR 6.8K OHM | 1/4W +-5% | 2 |
| 11368310517 | CARBON FILM RESISTOR 68K OHM | 1/4W +-5% | 1 |
| 11368830542 | FUSING RESISTOR 0.68 OHM 1W | +5% | 3 |
| 11368840542 | FUSEBLE RESISTOR 0.68 2W +-5% | | 1 |
| 11375010517 | CARBON FILM RESISTOR 75 OHM | 1/4W +-5% | 5 |
| 11382010517 | CARBON FILM RESISTOR 82 OHM | 1/4W +-5% | 2 |
| 11382110517 | CARBON FILM RESISTOR 820 OHM | 1/4W +-5% | 1 |
| 11382210517 | CARBON FILM RESISTOR 8.2K OHM | 1/4W +-5% | 4 |
| 11382250577 | METAL OXIDE FILM RESISTOR 8.2K | OHM 3W +-5% | 3 |
| 11382310517 | CARBON FILM RESISTOR 82K OHM | 1/4W +-5% | 2 |
| 11382960575 | METAL OXIDE FILM RESISTOR 8.2 | OHM 5W +-5% | 1 |
| 11421026200 | THERMISTOR PTH451C262B | | 1 |
| 12310135060 | CERAMIC CAP. 100 PF 50V +-10% | (SL TYPE) "SMART GOOD" | 3 |
| 12310235090 | CERAMIC CAP. 0.001 MFD 50V | +10% (B TYPE) | 10 |
| 12310337090 | CERAMIC CAP. 0.01 MFD 50V +80 | -20% | 12 |
| 12310337090 | CERAMIC CAP. 0.01 MFD 50V +80 | -20% | 3 |
| 12310427090 | CERAMIC CAP. 0.1 MFD 25V +80 | -20% | 6 |
| 12310427090 | CERAMIC CAP. 0.1 MFD 25V +80 | -20% | 1 |
| 12310435090 | CERAMIC CAP. 0.1 MFD 50V | +10% (B TYPE) | 2 |
| 12312135060 | CERAMIC CAP. 120 PF 50V +-10% | (SL TYPE) | 3 |
| 12312255190 | CERAMIC CAP. 0.0012 MFD 500V | +10% (B TYPE) MATSUSHITA | 1 |
| 12313034093 | CERAMIC CAP. 13PF 50V +-5% | (NPO) | 1 |
| 12315135060 | CERAMIC CAP 150 PF 50V +-10% | (SL TYPE) | 1 |
| 12315285010 | CERAMIC CAP. 0.0015 MFD 2KV | +10% MATSUSHITA | 1 |
| 12320934093 | CERAMIC CAP. 2PF 50V +-5% | (NPO) | 1 |
| 12322034060 | CERAMIC CAP. 22 PF 50V +-5% | (SL TYPE) | 4 |
| 12322135060 | CERAMIC CAP. 220 PF 50V +-10% | (SL TYPE) | 3 |
| 12322155190 | CERAMIC CAP. 220 PF 500V | +10% MATSUSHITA | 1 |
| 12322246650 | CERAMIC CAP. 0.0022 MFD 400VAC | +20% ECKDNA222ME "MATSUSHI" | 1 |
| 12322285010 | CERAMIC CAP. 0.0022 MFD 2KV | +10% MATSUSHITA | 1 |
| 12322337090 | CERAMIC CAP. 0.022 MFD 50V +80 | -20% | 12 |
| 12324034093 | CERAMIC CAP 24PF 50V +-5%(NPO) | | 1 |
| 12327034060 | CERAMIC CAP. 27 PF 50V +-5% | (SL-TYPE) | 1 |
| 12327034093 | CERAMIC CAP. 27PF 50V +-5% | (NPO) | 2 |
| 12327135060 | CERAMIC CAP. 270 PF 50V +-10% | (SL TYPE) | 2 |
| 12333034060 | CERAMIC CAP. 33 PF 50V +-5% | (SL TYPE) | 1 |
| 12333135060 | CERAMIC CAP. 330 PF 50V +-10% | (SL TYPE) | 1 |
| 12339034093 | CERAMIC CAP. 39PF 50V +-5% | (NPO) | 1 |
| 12339135060 | CERAMIC CAP. 390PF 50V +-10% | (SL TYPE) | 1 |
| 12347135060 | CERAMIC CAP. 470 PF 50V +-10% | (SL TYPE) | 3 |
| 12347235090 | CERAMIC CAP. 0.0047 MFD 50V | +10% (B TYPE) | 2 |
| 12347255090 | CERAMIC CAP. 0.0047 MFD 500V | +10% (B TYPE) | 2 |
| 12347255290 | CERAMIC CAP. 0.0047 MFD 500V | +10% (B TYPE) SMALL SIZE | 3 |
| 12347265090 | CERAMIC CAP. 4700 PF 1 KV | | 1 |
| 12347285010 | CERAMIC CAP. 0.0047MFD 2KV | +10% MATSUSHITA | 1 |
| 12368034060 | CERAMIC CAP. 68 PF 50V +-5% | (SL TYPE) | 1 |

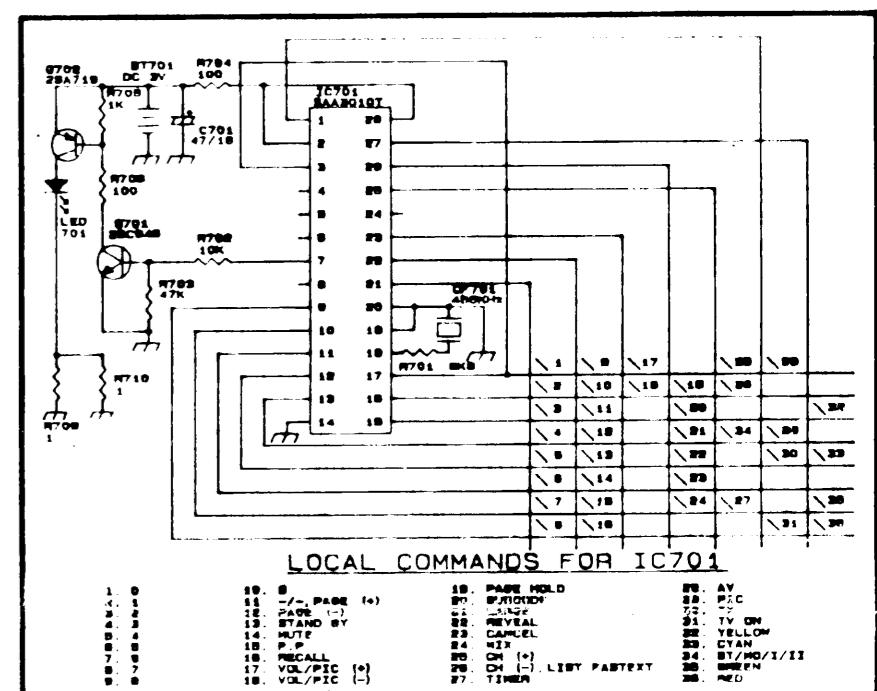
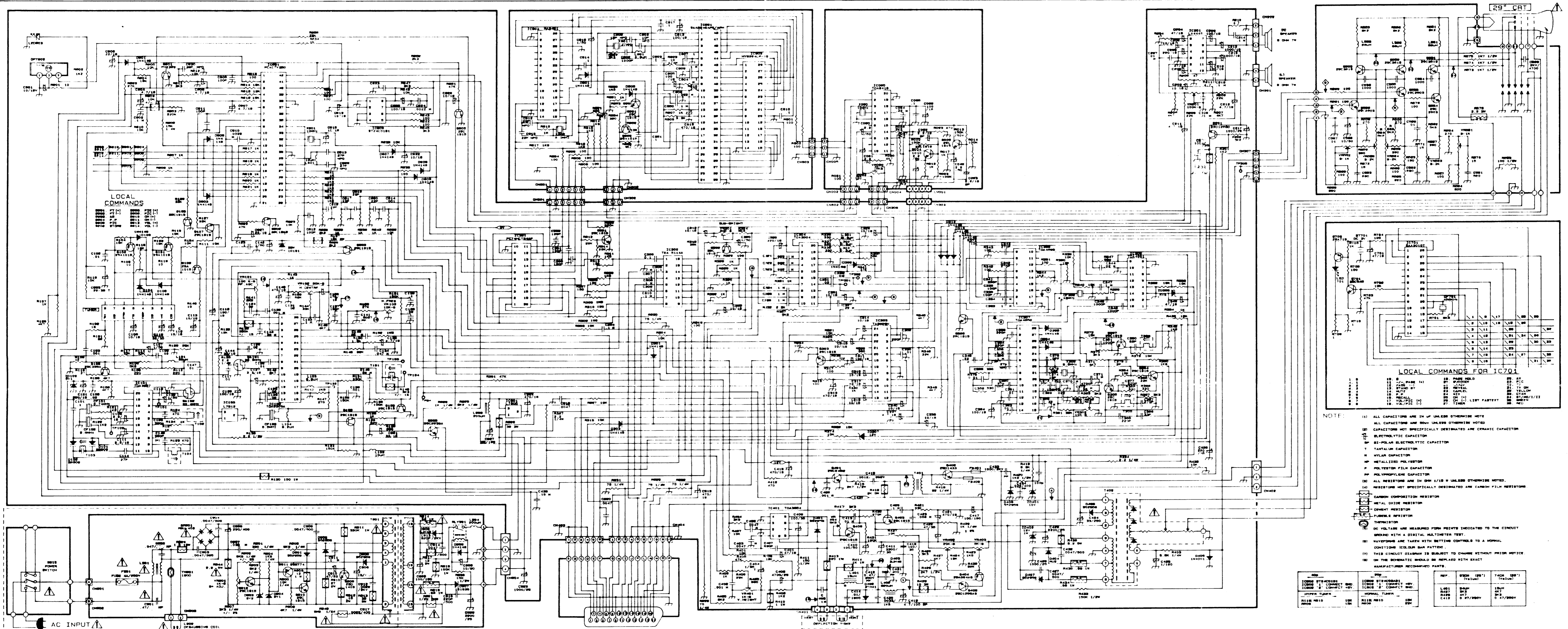
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| 12368135090 | CERAMIC CAP. 680 PF 50V +-10% | (B TYPE) | 1 |
| 12382185010 | CERAMIC CAP. 820 PF 2KV +-10% | (SL TYPE) MATSUSHITA | 2 |
| 12422406103 | TANTALIUM CAP. 0.22 MFD 35V | +10% | 2 |
| 12536112011 | POLYSTYRENE CAP. 360PF 125V | +5% | 1 |
| 12539112011 | POLYSTYRENE CAP. 390 PF 125V | +5% | 1 |
| 12610207101 | MYLAR CAP. 0.001 MFD 50V +-10% | | 3 |
| 12610307101 | MYLAR CAP. 0.01 MFD 50V +-10% | | 3 |
| 12610407101 | MYLAR CAP. 0.1 MFD 50V +-10% | | 12 |
| 12610407101 | MYLAR CAP. 0.1 MFD 50V +-10% | | 8 |
| 12622207101 | MYLAR CAP. 0.0022 MFD 50V | +10% | 2 |
| 12622307101 | MYLAR CAP. 0.022 MFD 50V +-10% | | 5 |
| 12622340131 | POLYPROPYLENE CAP. 0.022MFD | 400V +-10% | 2 |
| 12622407101 | MYLAR CAP 0.22 MFD 50V +-10% | | 5 |
| 12627207031 | POLYPROPYLENE CAP. 0.0027 MFD | 50V +-5% | 1 |
| 12633307101 | MYLAR CAP. 0.033 MFD 50V +-10% | | 1 |
| 12633407101 | MYLAR CAP. 0.33 MFD 50V +-10% | | 4 |
| 12636421131 | POLYPROPYLENE CAP. 0.36 MFD | 250V +-10% | 1 |
| 12647207101 | MYLAR CAP. 0.0047 MFD 50V | +10% | 2 |
| 12647216041 | METALLIZED POLYPROPYLENE CAP. | 0.0047 MFD 1600V +-5% | 2 |
| 12647307101 | MYLAR CAP. 0.047 MFD 50V +-10% | | 2 |
| 12647322241 | METALIZED POLYPROPYLENE CAP. | 0.047 MFD 275V +-20% "OKAYA" | 2 |
| 12647422241 | METALIZED POLYPROPYLENE CAP. | 0.47 MFD 275VAC +-20% "OKAYA" | 1 |
| 12668307101 | MYLAR CAP. 0.068 MFD 50V +-10% | | 1 |
| 12710507203 | ELECT. CAP. 1 MFD 50V +-20% | | 4 |
| 12710513203 | ELECT. CAP. 1 MFD 160V | +20% | 1 |
| 12710604203 | ELECT. CAP. 10 MFD 16V +-20% | | 8 |
| 12710604203 | ELECT. CAP. 10 MFD 16V +-20% | | 11 |
| 12710607203 | ELECT. CAP. 10 MFD 50V +-20% | | 2 |
| 12710610403 | ELECT CAP. 10 MFD 100V +-20% | 105øC | 1 |
| 12710704203 | ELECT. CAP. 100 MFD 16V +-20% | | 8 |
| 12710706203 | ELECT. CAP. 100 MFD 35V +-20% | | 2 |
| 12710713203 | ELECT. CAP. 100 MFD 160V +-20% | "NICHICON" | 3 |
| 12710804203 | ELECT. CAP. 1000 MFD 16V +-20% | | 2 |
| 12710805203 | ELECT. CAP. 1000 MFD 25V +-20% | | 5 |
| 12722504223 | ELECT. CAP. BIPOLAR 2.2MFD 16V | +20% | 2 |
| 12722507203 | ELECT. CAP 2.2 MFD 50V +-20% | | 9 |
| 12722604203 | ELECT. CAP. 22 MFD 16V +-20% | | 1 |
| 12722704203 | ELECT. CAP. 220 MFD 16V +-20% | | 3 |
| 12722706203 | ELECT. CAP. 220 MFD 35V +-20% | | 1 |
| 12722740203 | ELECT CAP. 220 MFD 400V +-20% | (i22MM-26MM) | 1 |
| 12722805203 | ELECT. CAP. 2200 MFD 25V +-20% | | 2 |
| 12733507105 | ELECT CAP. 3.3UF 50V +-10% | (TIME CONSTANT) | 1 |
| 12733507203 | ELECT CAP. 3.3 MFD 50V +-20% | | 1 |
| 12733604203 | ELECT. CAP. 33 MFD 16V +-20% | | 2 |
| 12733604223 | ELECT. CAP. BIPOLAR 33 MFD 16V | +20% | 1 |
| 12733625203 | ELECT CAP. 33 MFD 250V +-20% | | 1 |
| 12733806203 | ELECT CAP. 3300 MFD 35V +-20% | | 1 |
| 12747507203 | ELECT CAP 4.7 MED 50V | | 7 |
| 12747510223 | ELECT CAP.BIPOLAR 4.7MFD 100V | +20% | 1 |
| 12747604203 | ELECT. CAP. 47 MFD 16V +-20% | | 4 |
| 12747607207 | ELECT.CAP. 47 MFD 50V +-20% | NICHICON | 1 |
| 12747609407 | ELECT CAP. 47 MFD 63V +-20% | 105øC "NICHICON" | 1 |
| 12747704203 | ELECT. CAP. 470 MFD 16V +-20% | | 7 |
| 12747805203 | ELECT. CAP. 4700MFD 25V +-20% | | 1 |
| 13013414801 | SILICON DIODE IN4148 | | 12 |
| 13013414801 | SILICON DIODE IN4148 | | 9 |

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| 13024080950 | VERIABLE CAPACITANCE DIODE | BB809 | 2 |
| 13031034100 | RECTIFIER DIODE 3TH41 TOSHIBA | | 1 |
| 13031034500 | RECTIFIER DIODE 3JH45 TOSHIBA | | 2 |
| 13031040600 | BRIDGE RECTIFIER RBV-406 | SANKEN | 1 |
| 13031154560 | RECTIFIER DIODE 1R5JH45 | | 2 |
| 13031400101 | RECTIFIER DIODE 1N4001 | | 1 |
| 13031529500 | RECTIFIER DIODE S5295G TOSHIBA | | 7 |
| 13041005101 | ZENER DIODE 5.1V 1/2W +-5% | | 1 |
| 13041005601 | ZENER DIODE 5.6V | | 1 |
| 13041008201 | ZENER DIODE 8.2V | | 1 |
| 13041010001 | ZENER DIODE 10V 1/2W | | 1 |
| 13041012002 | ZENER DIODE 12V HZ12A2 | | 1 |
| 13041057400 | ZENER DIODE UPC 574J NEC | | 1 |
| 13041109101 | ZENER DIODE 9.1V | | 1 |
| 13042212000 | ZENER DIODE 1W 12V | | 1 |
| 13051204400 | LED 3MM RED 204HDC | | 1 |
| 13121056418 | TRANSISTOR 2SA564AQ | | 1 |
| 13121101500 | TRANSISTOR 2SA1015 TOSHIBA | | 3 |
| 13122077420 | TRANSISTOR 2SB774/Q/R/S | MATSUSHITA | 1 |
| 13123180900 | TRANSISTOR 2SC1809 ROHM | | 1 |
| 13123181525 | TRANSISTOR 2SC1815 TOSHIBA | | 9 |
| 13123181525 | TRANSISTOR 2SC1815 TOSHIBA | | 11 |
| 13123181525 | TRANSISTOR 2SC1815 TOSHIBA | | 3 |
| 13123223000 | NPN-TR 2SC2230A-Y (TOSHI) TO92 | VCE=180V IC=.1A HFE=120-240 | 1 |
| 13123248200 | TRANSISTOR 2SC2482 TOSHIBA | | 1 |
| 13123361900 | TRANSISTOR 2SC3619 | | 3 |
| 13123470600 | TRANSISTOR 2SC4706 SHIN HO | | 1 |
| 13124140625 | TRANSISTOR 2SD1406-Y TOSHIBA | | 1 |
| 13124140627 | TRANSISTOR 2SD1406-GR TOSHIBA | | 1 |
| 13124154700 | TRANSISTOR 2SD1547 TOSHIBA | | 1 |
| 13146236900 | TRANSISTOR PH2369 PHILIPS | | 1 |
| 13310035233 | I.C. CTV350S.GW2 PHILIPS | | 1 |
| 13310242131 | I.C. ST24C02AB1 SGS | | 1 |
| 13310350433 | I.C. TDA3504 PHILIPS | | 1 |
| 13310385733 | IC TDA3857 PHILIPS | | 1 |
| 13310456533 | I.C. TDA4565 PHILIPS | | 1 |
| 13310465033 | I.C. TDA 4650 PHILIPS | | 1 |
| 13310466533 | I.C. TDA4665 (PHILIPS IC) | | 1 |
| 13310830533 | IC TDA8305A PHILIPS | | 1 |
| 13310841633 | I.C. TDA8416 PHILIPS | | 1 |
| 13310862814 | IC TA8628N TOSHIBA | | 1 |
| 13320365433 | I.C. TDA3654 (PHILIPS) | | 1 |
| 13320444516 | I.C. LA4445 SANYO | | 1 |
| 13320780531 | I.C. L7805CV SGS | | 1 |
| 13320781231 | IC L7812CV SGS-THOMSON | | 1 |
| 13330424133 | I.C. PC74HCT241P PHILIPS | | 1 |
| 13330511431 | I.C. TEA5114A SGS | | 1 |
| 13650000200 | REMOTE RECEIVER (HC-SZ02) | | 1 |
| 13710000031 | CRYSTAL 10 MHZ HOORAY | | 2 |
| 13771590920 | CRYSTAL 7.15909 MHz | | 1 |
| 13788672320 | CRYSTAL 8.86 MHz KDS | | 1 |
| 14610000213 | TACT SWITCH KSM0634A HDK | | 12 |
| 14610000614 | POWER SWITCH PS5E-B | "CHINA LANDMARK" | 1 |
| 16010100108 | PIN CONNECTOR 1 PIN PLUG | STRAIGHT | 3 |
| 16010225527 | PIN CONNECTOR 2 PINS PLUG | STRAIGHT (UL) (S.H.S) | 1 |
| 16010280508 | PIN CONNECTOR 2 PIN PLUG | STRAIGHT | 1 |

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| 16010325527 | PIN CONNECTOR 3 PINS PLUG | | 8 |
| 16010380508 | PIN CONNECTOR 3 PIN PLUG | STRAIGHT | 1 |
| 16010425527 | PIN CONNECTOR 4 PINS PLUG | (SHS) | 3 |
| 16010480508 | PIN CONNECTOR 4 PIN PLUG | STRAIGHT | 2 |
| 16010525527 | PIN CONNECTOR 5 PINS WAFER | 2.5 PITCH | 1 |
| 16010625527 | PIN CONNECTOR 6 PINS WAFER | (SHS) S11-W | 2 |
| 16011025527 | PIN CONNECTOR 10 PINS PLUG | | 1 |
| 16148010532 | RF CONNECTOR #KP-JJ (PAL) | MIKI | 1 |
| 16154010501 | CRT SOCKET HPS0199-01-020 | (HOSIDEN) 29MM THICK | 1 |
| 16168370222 | 21 PIN SOCKET | | 1 |
| 17262001040 | UL 1007 TOP COAT WIRE AWG 20 | 100MM BLACK 10 X 10 MM | 1 |
| 17262001440 | UL 1007 TOP COAT WIRE AWG 20 | 140MM BLACK 10 X 10 MM | 2 |
| 17262001443 | UL 1007 TOP COAT WIRE AWG 20 | 140MM ORANGE 10 X 10MM | 1 |
| 17262200740 | UL 1007 TOP COAT WIRE #22 70MM | BLACK 5 X 5 MM | 2 |
| 17262200740 | UL 1007 TOP COAT WIRE #22 70MM | BLACK 5 X 5 MM | 0 |
| 17262600840 | UL 1007 TOP COAT WIRE AWG 26 | 80MM BLACK 10 X 10 MM | 2 |
| 17262600840 | UL 1007 TOP COAT WIRE AWG 26 | 80MM BLACK 10 X 10 MM | 2 |
| 17262601442 | UL 1007 TOP COAT WIRE AWG 26 | 140MM RED 10 X 10 MM | 1 |
| 17262601442 | UL 1007 TOP COAT WIRE AWG 26 | 140MM RED 10 X 10 MM | 1 |
| 17262601443 | UL 1007 TOP COAT WIRE AWG 26 | 140MM ORANGE 10 X 10 MM | 3 |
| 17262601643 | UL 1007 TOP COAT WIRE AWG 26 | 160MM ORANGE 10 X 10 MM | 2 |
| 17262601643 | UL 1007 TOP COAT WIRE AWG 26 | 160MM ORANGE 10 X 10 MM | 1 |
| 17262601843 | UL 1007 TOP COAT WIRE AWG 26 | 180MM ORANGE 10 X 10 MM | 2 |
| 17262602043 | TOP COAT WIRE 200MM AWG 26 | ORANGE 10 X 10MM | 1 |
| 17262602441 | UL 1007 TOP COAT WIRE AWG 26 | 240MM BROWN 10 X 10 MM | 3 |
| 17272600099 | BARE WIRE 54MM | | 10 |
| 17272600099 | BARE WIRE 54MM | | 0 |
| 17272600099 | BARE WIRE 54MM | | 0 |
| 17272600099 | BARE WIRE 54MM | | 0 |
| 17272600099 | BARE WIRE 54MM | | 0 |
| 17283012099 | FLAT BRIDED WIRE | | 2.6 |
| 17483302650 | DOUBLE SHIELD WIRE UL 2547 AWG | 28 260MM BLACK | 1 |
| 17765505302 | 2 PIN FLAT CABLE WIRE AWG 26 | 50MM | 1 |
| 17900101000 | OIL SLEEVING 1 mm DIA. | | 0.1 |
| 17900101000 | OIL SLEEVING 1 mm DIA. | | 0 |
| 17900101000 | OIL SLEEVING 1 mm DIA. | | 0 |
| 17900101000 | OIL SLEEVING 1 mm DIA. | | 0.1 |
| 17900101000 | OIL SLEEVING 1 mm DIA. | | 0 |
| 17910500000 | UL PVC TUBE 5mm DIA | | 0.4 |
| 17910500000 | UL PVC TUBE 5mm DIA | | 1.2 |
| 17911050000 | UL PVC TUBE 11MM DIA. | | 0.1 |
| 17940303000 | 3MM DIA. SHRINKABLE TUBE | | 0.3 |
| 18222400003 | FUSE T4A 250V | | 1 |
| 18435080508 | AXIAL LEAD BEAD INDUCTORS | "COILS" | 3 |
| 19088200004 | POWER SWITCH P.C.B. (270995) | | 1 |
| 19088280300 | CRT P.C.B. (280593) | | 1 |
| 19093250207 | POWER P.C.B. (280595) | | 1 |
| 19093290408 | 21 PIN SOCKET P.C.B. (140295) | | 1 |
| 19093290AXB | MAIN P.C.B. (120796) | | 1 |
| 19094200309 | NICAM/STEREO P.C.B. (061196) | | 1 |
| 19101100107 | 10 PINS SOCKET ASS'Y L=210MM | (1-6 FLT CABLE,7-10 S.S.CABLE) | 1 |
| 19101100107 | 10 PINS SOCKET ASS'Y L=210MM | (1-6 FLT CABLE,7-10 S.S.CABLE) | 0 |
| 19110003509 | 1 PIN SOCKET ASSM'Y L=400MM | (DOUBLE INSULATION) BROWN | 1 |
| 19110003609 | 1 PIN SOCKET ASSM'Y L=400MM | (DOUBLE INSULATION) BLUE | 1 |
| 19110100707 | 1 PIN SOCKET ASS'Y L=350MM | | 1 |
| 19110101207 | 1 PIN DOUBLE INSOLATION WIRE | AWG 18 L=400MM BLUE | 1 |

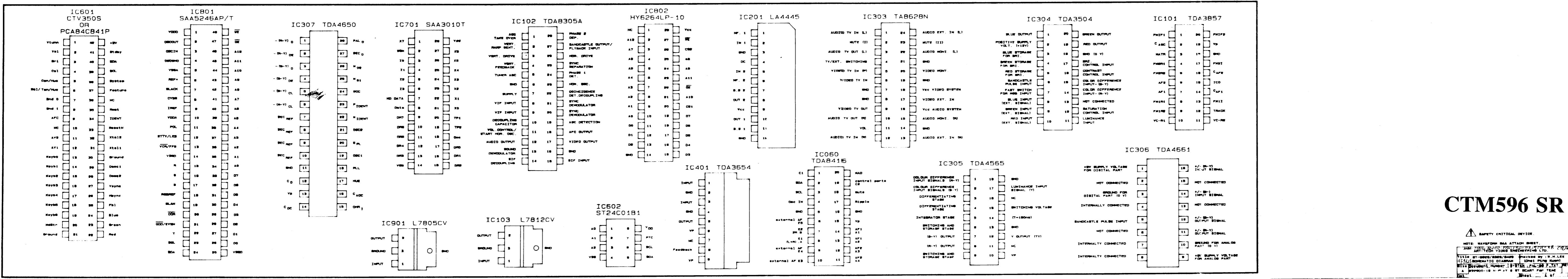
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| 19110101307 | 1 PIN DOUBLE INSOLATION WIRE | AWG 18 L=400MM BROWN | 1 |
| 19120100407 | 2 PINS SOCKET ASS'Y L=500MM | | 1 |
| 19120100607 | 2 PINS SOCKET ASS'Y L=700MM | | 1 |
| 19130100307 | 3 PINS SOCKET ASS'Y L=450MM | | 1 |
| 19130100307 | 3 PINS SOCKET ASS'Y L=450MM | | 0 |
| 19130100307 | 3 PINS SOCKET ASS'Y L=450MM | | 0 |
| 19130120207 | 3 PIN SOCKET ASSM'Y | | 1 |
| 19130120507 | 3 PINS SOCKET ASS'Y L=100MM | | 1 |
| 19140101407 | 4 PINS SOCKET ASS'Y L=350MM | | 1 |
| 19140101407 | 4 PINS SOCKET ASS'Y L=350MM | | 0 |
| 19140120107 | 4 PINS SOCKET ASS'Y L=60MM | | 1 |
| 19150004809 | 5 PIN SOCKET ASSM'Y L=480MM | | 1 |
| 19150004809 | 5 PIN SOCKET ASSM'Y L=480MM | | 0 |
| 19160100707 | 6 PINS SOCKET ASS'Y L=210MM | (1-6 PIN W/FLAT CABLE) | 1 |
| 19160100707 | 6 PINS SOCKET ASS'Y L=210MM | (1-6 PIN W/FLAT CABLE) | 0 |
| 40252200101 | COAXIAL CABLE W/DIN, RCA 250MM | | 1 |
| 50430500610 | MACHINE SCREW 3 X 6 B/M | (WHITE) | 6 |
| 50930501000 | MACHINE SCREW 3 X 10 KM | (BLACK) | 2 |
| 51440041210 | SELF-TAPPING SCREW 4 X 12 B/T | (HARDEN) | 1 |
| 51440041810 | SELF-TAPPING SCREW 4 X 18 B/T | (HARDEN) | 10 |
| 51440043510 | SELF-TAPPING SCREW 4 X 35 B/T | (HARDEN) | 3 |
| 51530341010 | SELF-TAPPING SCREW 3 X 10 | W/B/T (HARDEN) | 1 |
| 51530341010 | SELF-TAPPING SCREW 3 X 10 | W/B/T (HARDEN) | 32 |
| 51530341010 | SELF-TAPPING SCREW 3 X 10 | W/B/T (HARDEN) | 0 |
| 51730331210 | SELF-TAPPING SCREW 3 X 12 W/A | W/H=7MM (HARDEN) | 6 |
| 51730331210 | SELF-TAPPING SCREW 3 X 12 W/A | W/H=7MM (HARDEN) | 0 |
| 54002003001 | EYELET 2 X 3 MM | | 8 |
| 58010100401 | "EZ" TWIST LOCK SUPPORTS | #23EZ0625N0028 | 1 |
| 58010126101 | CABLE TIE L=100MM | | 22 |
| 58010126101 | CABLE TIE L=100MM | | 2 |
| 58010126101 | CABLE TIE L=100MM | | 3 |
| 58010126101 | CABLE TIE L=100MM | | 6 |
| 61888280100 | PACKING PAD (FOR POLYFOAM) | | 2 |
| 62288280200 | FELT L240 X W17 X T0.5MM | W/TAPE | 9 |
| 63011452000 | FIBRE WASHER | | 1 |
| 63011551200 | FIBRE WASHER 11 X 5.5 X 1.2 mm | | 4 |
| 66193250101 | FUSE LABEL - ATAKI DESIGN | (T4A/250V) | 1 |
| 74488130100 | SPRING FOR C.R.T. MOUNTING 5.2 | X 42 X 0.6MM | 2 |
| 74606310100 | TEST PIN:TOTAL LENGTH 18.6mm | THK:0.8mm | 2 |
| 74606310101 | AC LINE CORD PIN | | 4 |
| 75006310100 | SOLDERING LUG LEG:8X4MM | | 3 |
| 75006310201 | 35MM SOLDERING LUG | OD:7 ID:3.2 LEG:4X35MM | 5 |
| 76668680100 | FUSE HOLDER | | 2 |
| 77789200100 | SPRING IN 17.0 X L22 | | 1 |
| 77993250100 | IRON HEAT SINK | | 1 |
| 77993290202 | IRON HEAT SINK | | 1 |
| 78193250102 | ALUMINIUM HEAT SINK (POWER) | | 1 |
| 78193290301 | ALUMINIUM HEAT SINK (A) | | 1 |
| 78193290901 | ALUMINIUM HEAT SINK (L) | | 1 |
| 78193291001 | ALUMINIUM HEAT SINK (M) | | 1 |
| 78388130601 | SHIELD CAN COVER | | 1 |
| 78388131301 | SHIELD CAN | | 1 |
| 80094250100 | POLYFOAM - TOP LEFT | | 1 |
| 80094250200 | POLYFOAM - TOP RIGHT | | 1 |
| 80094250300 | POLYFOAM - BOTTOM LEFT | | 1 |
| 80094250400 | POLYFOAM - BOTTOM RIGHT | | 1 |

| | | | |
|-------------|---|--------------------------|---|
| 81005220414 | POLYBAG 5" X 22" X 0.04MM | PO MAT W/RE-CYCLING MARK | 1 |
| 81009150413 | POLYBAG 9" X 15" X 0.04MM W/ | RE-CYCLING MARK | 1 |
| 81045530414 | POLYBAG 45"X53"X0.04MM W/PUNCH HOLE/RE-CYCLING MARK (P/O MA | | 1 |
| 82643200500 | FOAM SHEET - 43" X 20" X 0.5MM | THK | 1 |
| 82647350500 | FOAM SHEET - 47" X 35" X 0.5MM | THK | 1 |
| 84001102421 | PAD CORD L240 X W10 X T1 MM | W/TAPE | 9 |
| 84005103011 | RUBBER PAD (ONE SIDE W/TAPE) | | 4 |
| 89688210100 | POWER BOARD COVER (UL) | | 1 |
| 920932901U0 | P.C.B. MTG. BRACKET | | 1 |
| 92988210300 | LED HOLDER BKT | | 1 |
| 93888200100 | SECAM BOARD HOLDER | | 4 |
| 93989200100 | POWER KNOB ADAPTER | | 1 |
| 94888200300 | DOOR LOCKER | | 1 |
| 94893290100 | PRESET DOOR HINGE CLIP | | 1 |
| 95488210000 | AC LINE CORD CLIP | | 1 |
| 95488280300 | HIGH VOLTAGE CABLE SPACER | | 2 |
| 99193290100 | POWER KNOB | | 1 |



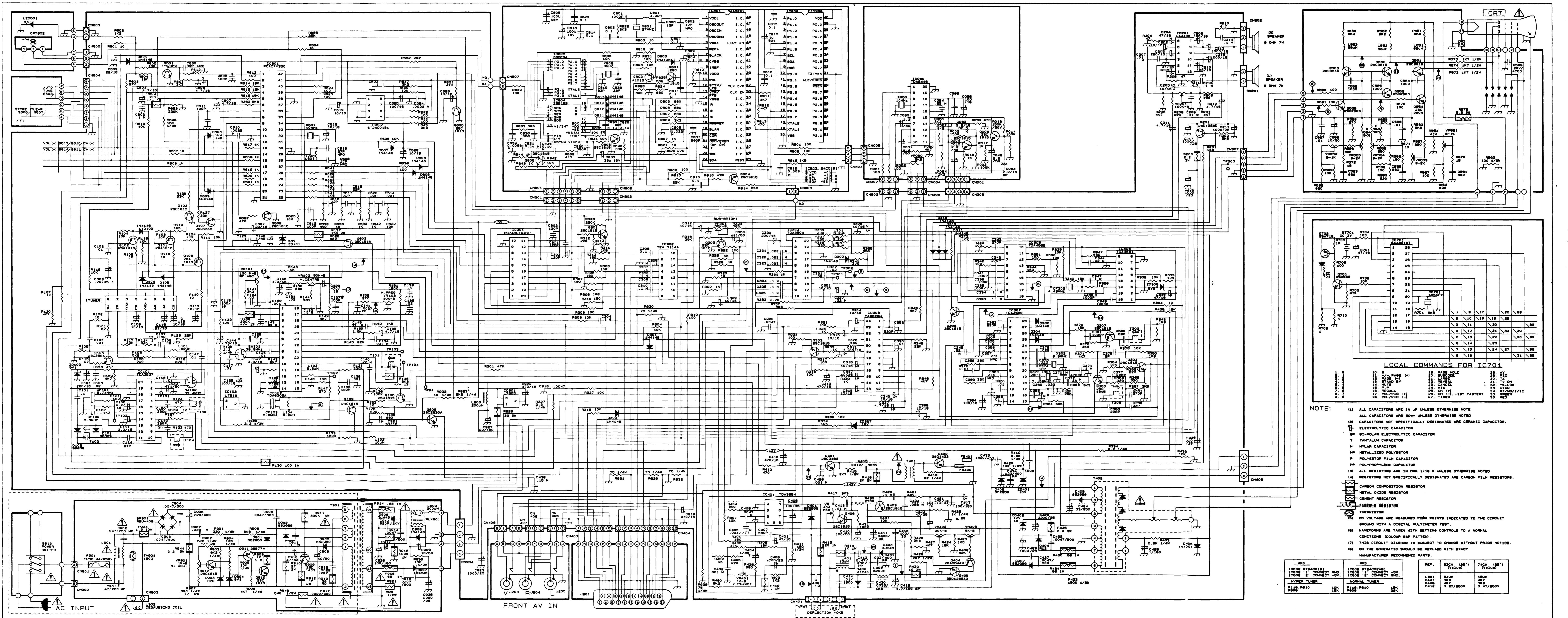
- NOTE:
- ALL CAPACITORS ARE IN μ F UNLESS OTHERWISE NOTED
 - CAPACITORS NOT SPECIFICALLY DESIGNATED ARE CERAMIC CAPACITORS
 - ELECTROLYTIC CAPACITOR
 - BI-POLAR ELECTROLYTIC CAPACITOR
 - TANTALUM CAPACITOR
 - MYLAR CAPACITOR
 - METALLIZED POLYESTER
 - POLYESTER FILM CAPACITOR
 - POLYPROPYLENE CAPACITOR
 - ALL RESISTORS ARE IN OHM Ω UNLESS OTHERWISE NOTED.
 - RESISTORS NOT SPECIFICALLY DESIGNATED ARE CARBON FILM RESISTORS
 - CARBON COMPOSITION RESISTOR
 - METAL OXIDE RESISTOR
 - CERMENT RESISTOR
 - FILM RESISTOR
 - DC VOLTAGE ARE MEASURED FROM POINTS INDICATED TO THE CIRCUIT GROUND WITH A DIGITAL MULTIMETER TEST.
 - WAVEFORMS ARE TAKEN WITH BITTING CONTROLS TO A NORMAL CONDITION (COLOR BAR PATTERN)
 - THIS CIRCUIT DIAGRAM IS SUBJECT TO CHANGE WITHOUT PRIOR NOTICE
 - ON THE SCHEMATIC SHOULD BE REPLACED WITH EXACT MANUFACTURER RECOMMENDED PARTS.

| RES | RES | RES | RES |
|-------------|-------------|-------------|-------------|
| 100M 5% RES | 100M 5% RES | 100M 5% RES | 100M 5% RES |
| 100M 5% RES | 100M 5% RES | 100M 5% RES | 100M 5% RES |
| 100M 5% RES | 100M 5% RES | 100M 5% RES | 100M 5% RES |
| 100M 5% RES | 100M 5% RES | 100M 5% RES | 100M 5% RES |



CTM596 SR

NOTE: SAFETY CRITICAL DEVICE
 THIS CIRCUIT DIAGRAM IS SUBJECT TO CHANGE WITHOUT PRIOR NOTICE
 MANUFACTURER RECOMMENDED PARTS

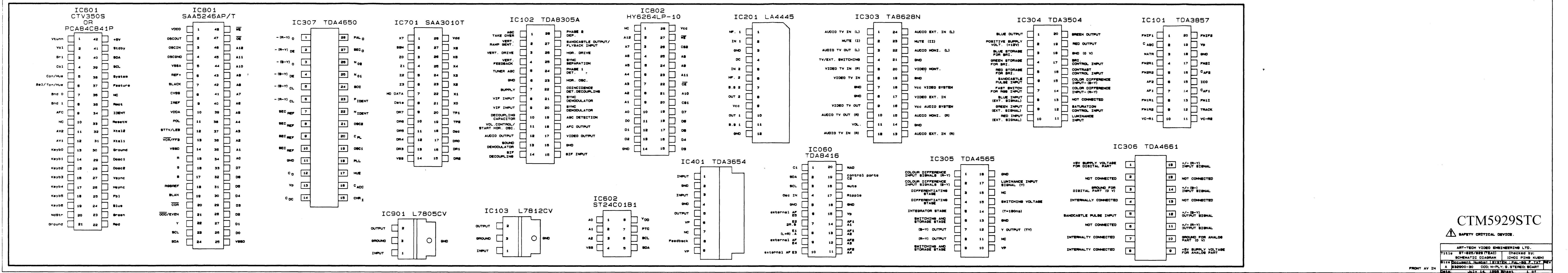


LOCAL COMMANDS FOR IC201

| | | | | | | | | | |
|----|----|----|----|----|----|----|----|----|----|
| 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 |
| 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 |
| 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 |
| 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 |
| 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 |
| 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 |
| 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 |
| 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 |
| 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 |
| 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 |
| 23 | 23 | 23 | 23 | 23 | 23 | 23 | 23 | 23 | 23 |
| 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 |
| 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| 26 | 26 | 26 | 26 | 26 | 26 | 26 | 26 | 26 | 26 |
| 27 | 27 | 27 | 27 | 27 | 27 | 27 | 27 | 27 | 27 |
| 28 | 28 | 28 | 28 | 28 | 28 | 28 | 28 | 28 | 28 |
| 29 | 29 | 29 | 29 | 29 | 29 | 29 | 29 | 29 | 29 |
| 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 |
| 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 |

- NOTE:**
- ALL CAPACITORS ARE IN μ F UNLESS OTHERWISE NOTED.
 - ALL CAPACITORS ARE 50V UNLESS OTHERWISE NOTED.
 - ELECTROLYTIC CAPACITOR.
 - CAPACITORS NOT SPECIFICALLY DESIGNATED ARE CERAMIC CAPACITOR.
 - BP BI-POLAR ELECTROLYTIC CAPACITOR
 - P POLYPROPYLENE CAPACITOR
 - Y TANTALUM CAPACITOR
 - N NYLON CAPACITOR
 - MP METALLIZED POLYESTER
 - P POLYESTER FILM CAPACITOR
 - PP POLYPROPYLENE CAPACITOR
 - ALL RESISTORS ARE IN OHM Ω UNLESS OTHERWISE NOTED.
 - RESISTORS NOT SPECIFICALLY DESIGNATED ARE CARBON FILM RESISTORS.
 - CARBON COMPOSITION RESISTOR
 - METAL OXIDE RESISTOR
 - CEMENT RESISTOR
 - FILM RESISTOR
 - RESISTOR
 - DC VOLTAGE ARE MEASURED FROM POINTS INDICATED TO THE CIRCUIT GROUND WITH A DIGITAL MULTIMETER TEST.
 - HAVEFORMS ARE TAKEN WITH SETTING CONTROLS TO A NORMAL CONDITION (COLOUR BAR PATTERN).
 - THIS CIRCUIT DIAGRAM IS SUBJECT TO CHANGE WITHOUT PRIOR NOTICE. MANUFACTURER RECOMMENDED PARTS.

| POS | POS | REF. | POS | POS |
|-------|-------|-------|-------|-------|
| IC201 | IC201 | IC201 | IC201 | IC201 |
| IC202 | IC202 | IC202 | IC202 | IC202 |
| IC203 | IC203 | IC203 | IC203 | IC203 |
| IC204 | IC204 | IC204 | IC204 | IC204 |
| IC205 | IC205 | IC205 | IC205 | IC205 |
| IC206 | IC206 | IC206 | IC206 | IC206 |
| IC207 | IC207 | IC207 | IC207 | IC207 |
| IC208 | IC208 | IC208 | IC208 | IC208 |
| IC209 | IC209 | IC209 | IC209 | IC209 |
| IC210 | IC210 | IC210 | IC210 | IC210 |
| IC211 | IC211 | IC211 | IC211 | IC211 |
| IC212 | IC212 | IC212 | IC212 | IC212 |
| IC213 | IC213 | IC213 | IC213 | IC213 |
| IC214 | IC214 | IC214 | IC214 | IC214 |
| IC215 | IC215 | IC215 | IC215 | IC215 |
| IC216 | IC216 | IC216 | IC216 | IC216 |
| IC217 | IC217 | IC217 | IC217 | IC217 |
| IC218 | IC218 | IC218 | IC218 | IC218 |
| IC219 | IC219 | IC219 | IC219 | IC219 |
| IC220 | IC220 | IC220 | IC220 | IC220 |



CTM5929STC
SAFETY CRITICAL DEVICE

ANY-TECH VIDEO ENGINEERING LTD.
ST-48/888/7202
SCHEMATIC DIAGRAM
CHECKED BY: []
DRAWN BY: []
DATE: []